

After the great shake, many of those people who escaped got on board ships in the harbour, where many continued above two months; the shakes all that time being so violent, and coming so thick, sometimes two or three in an hour, accompanied with frightfull noises like a rustling wind, or a hollow rumbling thunder, with brimstone blasts, that they durst not come ashore. The consequence of the earthquake was a general sickness, from the noisome vapours belched forth, which swept away above 3000 persons of those who were left. After the detail of these horrible convulsions, the reader will have but little curiosity left for the phenomena of the earthquake at Lima in 1687, described by Fa. Alvarez de Toledo, wherein above 5000 persons were destroyed; this being of the vibratory kind, so that the bells in the church rung of themselves; or that at Batavia, in 1699, by Witzen; that in the north of England, in 1703, by Mr. Thoresby; those in New England, in 1663 and 1670, by Dr. Matthew; that of Italy in 1742; that of Lima and the port of Calas in Peru, in 1746, which lasted fifteen minutes, and destroyed most of the buildings in the city, and destroyed most of the inhabitants, and swallowed up several ships then in the port; that of London in 1749; those in 1750, felt in many parts of England; that of 1777, felt in the north of England; or that at Lisbon in 1755: though this deserves a more particular account than many others of much less considerable extent and duration. The three preceding years had been remarkable dry, insomuch that some springs which had been plentifully supplied with water were totally lost; and the predominant winds were east and north-east, accompanied with various, though very small motions and tremblings of the earth. The spring of the year 1755 was very rainy and wet; the weather on the day preceding the earthquake, which happened on the 1st of November, was clear and uncommonly warm for the season, and had continued clear and rather warmer than usual for several days before. The day of the earthquake broke with a serene sky, the wind continuing at east; but about nine o'clock the Sun began to grow dim; and soon after was heard a rumbling noise, like that of carriages, which increased to such a degree as to equal that of the loudest cannon; upon which the first shock was felt, which was immediately succeeded by a second and a third, the whole duration of which was about eight minutes; about twelve o'clock another shock was felt.

During the first shock, the greatest part of the public edifices and other buildings of the city were thrown down; and not less than sixty thousand of its inhabitants buried in the ruins. The earth opened in fissures in several parts, and several light flames of fire were observed to issue from the sides of the mountains, resembling those of kindled charcoal.

coal. Subterraneous rumblings were also felt, attended with a discharge of great quantities of smoke. The water in the sea rose several times, and in a few minutes made three fluxes and refluxes, rising above the greatest spring-tides no less than fifteen English feet. The shock was so violent fifty leagues off at sea, as greatly to injure the deck of a ship, and to lead the captain to apprehend, that he had mistaken his reckoning and struck on a rock. The shock was also felt about the same time at Oporto, by which the whole city was shaken, several chimnies, stones, and crosses, were thrown down, and some buildings opened at top; and the swelling in the river was so considerable, that two large ships, which were just got over the bar, were driven back into the harbour. The same shock was equally violent at Madrid, Seville, and Cadiz; and in this last place the sea rose in a wave at least sixty feet higher than usual, dashed against the rocks on the west part of the town, and against the walls with such violence as to beat in the breast-work and a great part of the walls, so that several persons were drowned by it. The day when the earthquake happened at Cadiz was as clear and serene as the finest summer-day in England. Many other cities, both in Spain and Portugal, were considerably damaged. The effects of this earthquake, in violently agitating the waters, were perceived in many parts of England, Scotland, and Ireland; and the shock not only reached to Switzerland, Holland, and other parts of Europe, but it was communicated to Africa, and destroyed several cities on the coast of Barbary; and it was also felt about the same time in the island of Madeira, where the water rose full fifteen feet perpendicular above high water mark.

The last terrible earthquake of which we have any account, happened in Sicily and Calabria, in the year 1782. It began about six o'clock in the morning of the 5th of February, and the shocks continued to be felt with more or less violence for near two months. The commotions first broke out at mount Caulone, one of the Apennines, which traverses through all Italy. The indulations were observed to be in every direction; but the vertical ones were the most fatal. The towns and villages in Calabria, that were either totally or partly destroyed by it, is really prodigious. Among the principal ones are Francavilla, Batatico, Monteleone, Vallelonga, Francia, Mileto, Soriano, Areta, Rossano, Palma, Cinquefronde, Sinopoli, St. Euphemia, Scilla, Reggio, Beva, Messina, Oppido, Bagnara, Cozenza, Catanzara, Maida, Cattiglione, &c. The face of the whole country became entirely changed; the courses of many springs and rivers were either totally absorbed, or turned into new directions; and several water-mills were left dry, without the least vestiges of the channels by which they had been driven. A considerable tract

tract of country was entirely swallowed up by the sea ; and that which was before covered with water, became dry land. Whole flocks of sheep, and herds of cattle, were swallowed up as they were grazing ; the earth opened and shut, exhibiting chasms of the most horrible depth, vomiting forth sulphureous flame and vapour. Upwards of twenty-six thousand souls were either precipitated into the bowels of the earth, or mangled by the fall of buildings, and buried in the ruins ! By this no less fatal, than recent example of the phenomena of earthquakes, it should seem that the cause or seat of them, lies far below the surface of the earth, or depths of the ocean.

Of the T I D E S.

The Tides are two periodical motions of the waters of the sea, called also the flux and reflux, or the ebb and flow. When the Moon is in the first and third quarter, i. e. when she is new and full, the tides are high and swift, and are called *spring-tides*—when she is in the second and last quarter, the tides are lower and slower, and are called *neap-tides*.

In the phenomena of the tides, the sea is observed to flow, for certain hours, from south towards north ; in which motion, or flux, which lasts about six hours, the sea gradually swells ; so that, entering the mouths of rivers, it drives back the river-waters toward their heads, or springs. After a continual flux of six hours, the sea seems to rest for about a quarter of an hour ; after which it begins to ebb, or retire back again from north to south, for six hours more ; in which time, the water sinking, the rivers resume their natural course. Then, after a seeming pause of a quarter of an hour, the sea again begins to flow, as before ; and thus alternately. Thus does the sea ebb twice a day, and flow as often ; but not in the same hours thereof. The period of a flux and reflux is twelve hours forty-eight minutes, so that the tides return later and later each day, by forty-eight minutes, or three quarters of an hour and three minutes. Now twelve hours forty-eight minutes is a lunar day ; i. e. the Moon passes the earth's meridian later and later each day, by forty-eight minutes. So that the sea flows as often as the Moon passes the two meridians of the world, namely, that above, and that below the horizon ; and ebbs as often as she passes the horizon, both the eastern and western points thereof. This farther agreement we likewise observe between the Moon and the sea ; that the tides, though constant, are not equal ; but are greatest when the Moon is in conjunction or opposition, and least when in quartile thereto. But those tides are the greatest, which happen in the new and full Moon, at the time

of the equinoxes. And these same effects are observed throughout most of the coasts of Europe; only that the tides are so much the less, and happen later, as the coasts are the more northerly.

These phenomena of the tides are admirably accounted for, from the principles of gravitation. All that is requisite to their solution is, that the earth and Moon, and every particle thereof, mutually gravitate towards each other; the reasonableness of which assumption is every way apparent. Indeed the sagacious Kepler, long ago, conjectured this to be the cause of the tides. "If, says he, the earth ceased to attract its waters towards itself, all the water in the ocean would rise and flow into the Moon: the sphere of the Moon's attraction extends to our earth, and draws up the water." Thus thought Kepler, in his *Introd. ad. Theor. Mart.* This surmise, for it was then no more, is now abundantly verified in the theory first amply deduced by Dr. Halley, from the Newtonian principles. However, we may observe with M. de la Lande (*Astronomie*, vol. iv. Paris, 1781.) that several of the ancients, and among others, Pliny, Ptolomy, and Macrobius, were acquainted with the influence of the Sun and Moon upon the tides. And Pliny says expressly, that the cause of the ebb and flow is in the Sun, which attracts the waters of the ocean; and adds, that the waters rise in proportion to the proximity of the Moon to the earth.

To illustrate the foregoing observations, let N E S Q, in the annexed plate, *fig. 1.* represent the earth, covered over with water A B D F; N S the axis of the earth, E Q the equator, T R the tropic of Cancer, *t r* the tropic of Capricorn, M the Moon in her orbit, S the Sun in his. Now since all bodies are endued with an attracting virtue, the Moon will attract all the water in the nearest hemisphere F A B, with degrees of force which are inversely as the squares of the distances from all parts; and therefore with the strongest force where the distance is least, viz. in the point A, directly under her: and this attraction being in this hemisphere contrary to that of the earth, the water in all parts from B to F towards A will have its gravity decreasing, and be highest of all at the part A; and consequently must there stand higher than at the point F, where being more attracted by the Earth, it must be heavier and nearer to the center, as is evident from the laws of hydrostatics. Again, in the hemisphere F D B, the attraction of the Moon conspires with that of the earth; but decreasing as the squares of the distances increase, the joint force of attraction will every where decrease from F and B towards D, the point opposite to the Moon; where, again, the waters will be lightest, and therefore stand highest to preserve the equilibrium. Whence it appears, that
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by this sum and difference of the Moon's and earth's attraction, there will necessarily ensue a protuberance or swelling of the waters, which we call tides of flood, in the two points A and D directly under the Moon. Also in the two points F and B, as the waters are there most attracted, so they will be heaviest, and consequently rise to the least height from the earth's surface, whence they are called tides of ebb, or the ebbing of the water. If to the power of the Moon we add that of the Sun, we shall have the tides considerably augmented at the conjunction in S, or opposition in H, that is, at the new and full Moon's, which are called the spring-tides; as those which happen when the Sun is at O or P, are called neap-tides, the waters at A and D being then lowest, because the attraction of the Moon is then counterbalanced by that of the Sun. It is farther to be observed, that of the two tides of flood at A and D, that at A is greatest to any place T in the northern latitude, when the Moon is in the northern signs, and above the horizon: for the point A is then nearer the zenith of the place G, than the opposite point D is to the same place at R twelve hours afterwards; and consequently, the height of the tide T G is greater than that of the opposite tide R g. The contrary of this happens, when the Moon is in the southern signs.

That there are two tides of flood, and two of ebb, succeeding each other alternately at about the interval of six hours, is obvious from the figure: and that they happen later each day near an hour, is owing to their exact correspondence to the motion of the Moon, which daily culminates so much later. That they happen not when the Moon is in the meridian, but, about three hours after, is owing to the force of the Moon being then greater than when in the meridian of any place; as the heat of the day is greater at three o'clock than at twelve; and the heat of the summer is greater in August, than at the 21st of June. Lastly, that the greatest spring-tides happen not at the 21st of March, and 23d of September, but in February and October, is because the Sun being nearest the earth in December, his influence is then strongest, and so must quicken the time of the greatest vernal tides; and being weakest in June, the time of the autumnal tides will necessarily be retarded. The sum of what has been said is this: if N O P Q, *fig. 2.* be the surface of the earth, T its center, I F K G L H C E a circle representing the spherical surface of the waters covering the earth, and affected only by the attractive power of the earth: upon placing an attracting body at S, the waters will no longer continue their spherical figure, but be immediately drawn into the spheroidical figure A C B D, in such manner, as to be depressed at C and D to M and K, and elevated from L and I to A and

and B; and the elevation A L or B I, is double the depression C M or D K. That if S be the Sun, then $AP - OK = AL + KD = 25$ inches; or $11\frac{1}{2}$ feet, if S be the Moon. That at the points E, F, G, H, (which are called the octants) the water is neither elevated nor depressed. That if any other body be placed at O, as the Moon, in the same right line T S; then by the joint influence of both S and O, the elevation at A and B will be increased, and the depression at C and D likewise. Lastly, if S be in the situation S, or vertical to the point D, it is plain its action to raise the water D will be directly contrary to that of the Moon in depressing it there; wherefore the depression will not be so great as before; for the same reason the elevation at A and B will be diminished, being now only as the difference of the two forces, whereas before they were as the sum.

We shall now consider the phenomena of the tides which remain; and first, it is evident, that if P N be the axis of the earth, and Q O the diameter of the equator, then the Moon situated at O, over one of the poles, would accumulate the water over each pole, and the spheroid would be so posited as to have its longest axis A B coinciding with the axis of the earth P N. In this position of the spheroid, it is plain, there could be no such thing as a tide in any part of the ocean over all the earth; for every section of the spheroid, parallel to the equator, would be a circle; consequently in any parallel of latitude, the water would be at an equal distance from the earth's surface every moment of the diurnal revolution, or natural day. Suppose the Moon were removed from the direction of the earth's axis, and posited at S, *fig. 3*, then will the axis of the aqueous spheroid A B be turned towards S, and make an angle with the earth's axis, as A T P or B T N. Then we observe, that since C, D, are the places of lowest water, that parallel I K which passes through the point I on one side the equator, and L M which passes through M on the other, will divide the earth into three zones, in two of which, viz. E N K and L P M, there will be but one tide each day, of the same kind; for instance, in the parallel E F, a person at F will have high water, and at E low water for twelve hours after. Again, in all the zone I K M L, there will be two tides of the same kind each day, as is evident from the figure. These limits, or the arch Q I or O M, is the complement of the Moon's declination from the equator. If the Moon at S, *fig. 4*, be over the equator, the longer axis of the spheroid A B will now coincide with the plane of the equator Q O, and the shorter axis C D with the axis of the earth N P. Here it is obvious, that in this situation of the spheroid, the waters in the parts A B, with respect to those at C D, will give the greatest difference of high and low water possible to all parts of the

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the earth; and that there is no place but those two at the poles N, P, but what has two tides of flood, and two of ebb every twenty-four hours. And this difference of the flux and reflux will decrease from the equator to the poles.

It has been already observed, that the greatest elevation of the waters is not when the luminary is in the meridian, but about three hours after, because the motion communicated to the waters during the arrival of the meridian is not immediately destroyed, but remains for some time, and receives a farther augmentation from that which is impressed for about three hours after. For the same reason, we observe, the greatest and least tides happen not on the day of the syzygy, or quadrature, but on the third or fourth after; the sum or difference of the forces of the luminaries not being till then at a maximum. Let S F E G, *fig. 5.* be the orbit of the Moon about the earth Q N O P, which as it is not circular but elliptical, the center of the earth T will not be always at an equal distance from the Moon; but the Moon will be sometimes nearest the earth, as when at S, and sometimes farthest off, as at E. The point S is called the perigæum, or perigee; and the point E the apogæum, or apogee. The power of the Moon in her perigee is to that in the apogee nearly as $T E^3$ to $T S^3$; and consequently the greatest tides will be on the day of the perigee, or rather a few days after, for the reasons above mentioned.

Such would the tides regularly be, if the earth were all over covered with sea very deep, so that the water might follow the influence of the Sun and Moon; but, by reason of the shoalness of some places, and the narrowness of the streights in others, by which the tides are propagated, there arises a great diversity in the effect, not to be accounted for, without an exact knowledge of all the circumstances of the several places where they happen; as the position of the land, the breadth and depth of the channels, direction of the winds, &c.

For a very slow and imperceptible motion of the whole body of water, where it is (for example) two miles deep, will suffice to raise its surface ten or twelve feet in a tide's time; whereas, if the same quantity of water were to be conveyed through a channel forty fathom deep, it would require a very great stream to effect it in so large inlets as are the channel of England, and the German ocean; whence the tide is found to set strongest in those places where the sea grows narrowest, the same quantity of water being, in that case, to pass through a smaller passage. This is most evident in the streights between Portland and Cape la Hogue in
 No. 52. Normandy,

Normandy, where the tide runs like a sluice: and would be yet more between Dover and Calais, if the tide, coming round the island, did not check it. This force, being once impressed upon the water, continues to carry it above the level of the ordinary height in the ocean, particularly where the water meets a direct obstacle, as it does in St. Maloes; and where it enters into a long channel, which running far into the land, grows very straight at its extremity, as it does into the Severn at Chepstow and Bristol. This shoalness of the sea, and the intercurrent continents, are the reasons that in the open ocean the tides rise but to very small heights in proportion to what they do in wide-mouthed rivers, opening in the direction of the stream of the tide, as it is observed upon all the western coasts of Europe and Africa, from Ireland to the Cape of Good Hope; in all which a south west Moon makes high water; and the same is reported to hold in the west of America. So that tides happen to different places at all distances of the Moon from the meridian, and consequently at all hours of the lunar day.

It is to be considered that, in order to allow the tides their full motion, the ocean, in which they are produced, ought to be extended from east to west ninety degrees at least. Because the places, where the Moon raises most, and most depresses the water, are at that distance from each other. Hence it appears, that it is only in the great oceans that such tides can be produced, and why in the larger Pacific ocean they exceed those in the Atlantic ocean. Hence also it is obvious, why the tides are not so great in the torrid zone, between Africa and America, where the ocean is narrower, as in the temperate zones on either side; and we may hence also understand, why the tides are so small in islands that are very far distant from the shores. It is manifest that, in the Atlantic ocean, the water cannot rise on one shore but by descending on the other; so that, at the intermediate distant islands, it must continue at a mean height betwixt its elevation on one and on the other shore. But when tides pass over shoals, and through straits into bays of the sea, their motion becomes more various and complicated, and their height depends on many circumstances.

The tide that is produced on the western coasts of Europe, in the Atlantic, corresponds to the situation of the Moon already described. Thus it is high water on the coasts of Spain, Portugal, and the west of Ireland, about the third hour after the Moon has passed the meridian; from thence it flows into the adjacent channels, as it finds the easiest passage. One current from it, for example, runs up by the south of England, another comes in by the north of Scotland; they take a considerable time to
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move all this way, and it is high water soonest at those places to which they first come, and it begins to fall at those places, while they are still going on to others that are farther in their course. As they return, they are not able to raise the tide, because the water runs faster off than it returns, till, by a new tide propagated from the open ocean, the return of the current is stopped, and the water begins to rise again. The tide, propagated by the Moon, in the German ocean, when she is three hours past the meridian, takes twelve hours to come from thence to London-bridge; so that, when it is high water there, a new tide is already come to its height in the ocean; and, in some intermediate place, it must be low-water at the same time. Consequently, when the Moon has north declination, and we should expect the tide at London to be the greatest when the Moon is above the horizon, we find it is least; and the contrary when she has south declination. At several places it is high water three hours before the Moon comes to the meridian; but that tide which the Moon pushes, as it were, before her, is only the tide opposite to that which was raised by her when she was nine hours past the meridian.

It would be endless to recount all the particular solutions which are easy corollaries from this doctrine; as, why the lakes and seas, such as the Caspian sea and the Mediterranean sea, the Black sea and Baltic, have no sensible tides: for lakes are generally so small, that when the Moon is vertical she attracts every part of them alike, and therefore, no part of the water can be raised higher than another: and having no communication with the ocean, it can neither increase nor diminish their water, in order to rise or fall; and seas that communicate by such narrow inlets, and are of so immense an extent, cannot, in a few hours time, receive and empty water enough to raise or sink their surface any thing sensibly. To demonstrate the excellency of this doctrine, the example of the tides in the port of Batsha, in the kingdom of Tunquin in the East Indies, in 20 degrees 50 minutes north latitude, which are so extraordinary and different from all others we have yet heard of, may suffice. The day in which the Moon passes the equinoctial, the water stagnates there without any motion; as the Moon removes from the equinoctial, the water begins to rise and fall once a day; and it is high-water at the setting of the Moon, and low-water at her rising. This daily tide increases for about seven or eight days, and then decreases for as many days by the same degrees, till this motion ceases, when the Moon has returned to the equinoctial. When she has passed the equinoctial, and declines toward the south pole, the water rises and falls again as before; but it is high water now at the rising, and low water at the setting of the Moon. Sir Isaac Newton, in order to account for this extraordinary tide, considers

ders that there are two inlets to this port of Batsha, one from the Chinese ocean, betwixt the continent and the Manillas, the other from the Indian ocean betwixt the continent and Borneo. This leads him to propose, as a solution of this phenomenon, that a tide may arrive at Batsha, through one of these inlets, at the third hour of the Moon, and another through the other inlet six hours after, at the ninth hour of the Moon. For, while the tides are equal, the one flowing in as the other ebbs out, the water must stagnate; now they are equal when the Moon is in the equinoctial; but as soon as the Moon begins to decline on the same side of the equator with Batsha, it has been shewn that the diurnal tide must exceed the nocturnal, so that two greater and two lesser tides must arrive at Batsha by turns. The difference of these will produce an agitation of the water, which will rise to its greatest height at the mean time betwixt the two greatest tides, and fall lowest at a mean time betwixt the two least tides; so that it will be high water about the sixth hour at the setting of the Moon, and low water at her rising. When the Moon has got to the other side of the equinoctial, the nocturnal tide will exceed the diurnal; and, therefore, the high water will be at the rising, and low water at the setting of the Moon. The same principles will serve to account for other extraordinary tides, which, we are told, are observed in places whose situation exposes them to such irregularities, and which appear to admit of no other solution.

When the time of high water at any place is, in general, mentioned, it is to be understood on the days of the syzigies, or days of new and full Moon; when the Sun and Moon pass the meridian of the place at the same time. Among pilots, it is customary to reckon the time of flood, or high water, by the point of the compass the Moon bears on, allowing three quarters of an hour for each point, at that time; thus, on the full and change days, in places where it is flood at noon, the tide is said to flow north and south, or at twelve o'clock; in other places, on the same days, where the Moon bears 1, 2, 3, 4, or more points to the east or west of the meridian, when it is high water, the tide is said to flow on such point; thus, if the Moon bears S. E. at flood, it is said to flow S. E. and N. W. or three hours *before* the meridian, that is, at nine o'clock: if it bears S. W. it flows S. W. and N. E. or at three hours *after* the meridian; and in like manner for other times of the Moon's bearing. The times of high water in any place fall about the same hours after a period of about fifteen days, or between one spring tide and another; but during that period, the times of high water fall each day later by about forty-eight minutes. From these calculations, assisted by the observations of a number of different persons, there have been collected

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on most of the sea-coasts of Europe, and many other places, the times when it is high water, on the days of the new and full Moon; of which the following exhibits a correct and useful Table.

			H.	M.
Abbevrak, in France	-	English Channel	4	30
Aberdeen, Scotland	-	German ocean	9	45
Aldborough, England	-	Ditto	9	45
Isle of Alderney, ditto	-	English channel	12	00
River Amazon's mouth, America	-	Atlantic ocean	6	00
Isle of Ameyland, Dutchland	-	German ocean	7	30
Amsterdam, ditto	-	Ditto	3	00
St. Andrew's, Scotland	-	Ditto	2	15
Isle of Anholt, Denmark	-	Sound	0	00
Antwerp, Flanders,	-	River Schelde	6	00
Archangel, Russia,	-	White sea	6	00
Isle of Arran, Ireland	-	St. George's channel	11	00
R. Ashley, Carolina	-	Atlantic ocean	0	45
St. Augustine, Florida	-	Ditto	4	30
Baltimore, Ireland	-	Western ocean	4	30
Cape Barfleur, France	-	English channel	7	30
Isle de Bas, ditto	-	Ditto	3	45
Bayonne, ditto	-	Bay of Biscay	3	30
Beachy Head, England	-	English channel	0	00
North Bear, } Labrador	-	Hudson's Bay	12	00
South Bear, }	-			
Belfast, Ireland	-	Irish sea	10	00
Bellisle, France	-	Bay of Biscay	3	30
Isle Bermudas, Bahama Isles	-	Atlantic ocean	7	00
Berwick, England	-	German ocean	2	30
Isle du Bic, Acadia	-	River St. Lawrence	2	00
Blackney, England	-	German ocean	6	00
Cape Blanco, Negroland	-	Atlantic ocean	9	45
Blanchart Race, France	-	English channel	0	00
Port Louis, ditto	-	Bay of Biscay	3	00
Cape Bojador, Negroland	-	Atlantic ocean	0	00
Bourdeaux, France	-	Bay of Biscay	3	00
Boulogne, ditto	-	English channel	10	30
Bremen, Germany	-	River Weser	6	00
Breesound, Dutchland	-	German ocean	4	30
Brest, France	-	Bay of Biscay	3	45
Bridlington Bay, England	-	German ocean	3	45
Brill, Dutchland	-	Ditto	1	30
No. 52.		11 P		Bristol,

Bristol, England	- - -	St. George's channel	- 6	45
Buchanefs, Scotland	- -	German ocean	- 3	00
Button's Isles, North Britain	-	Hudson's straits	- 6	50
Cadiz, Spain	- - - -	Atlantic ocean	- 4	30
Caen, France	- -	English channel	- 9	00
Calais, ditto	- -	Ditto	- 11	30
Isle of Caldy, England	-	St. George's channel	- 5	15
Camfer, Dutchland	-	German ocean	- 1	30
Isle of Canaria, Canaries	-	Atlantic ocean	- 3	00
Cape Cantin, Barbary	- -	Ditto	- 0	00
Caskets, Isle of Guernsey	-	English channel	- 8	15
Caithness point, Scotland	-	Western ocean	- 9	00
Charles town, Carolina	- -	Ashley river	- 3	00
Isle of Charles, Labrador	-	Hudson's straits	- 10	15
Chignectow, Nova Scotia	-	Bay of Fundy	- 0	45
Cherbourg, France	-	English channel	- 7	30
Cape and R. Churchill, N. Wales	-	Hudson's bay	- 7	20
Cape Clear, Ireland	- -	Western ocean	- 4	30
Concarneau, France	- -	Bay of Biscay	- 3	00
Conquet, ditto	- -	English channel	- 2	15
Isle of Coquet, England	-	German ocean	- 3	00
Corke, Ireland	- -	St. George's channel	- 6	30
Cape Corfe, Guinea	- -	Ethiopian sea	- 3	30
Gromer, England	- -	German ocean	- 7	00
Dartmouth, ditto	- -	English channel	- 6	30
St. David's Head, Wales	-	St. George's channel	- 6	00
Dieppe, France	- -	English channel	- 10	30
Dort, Dutchland	- -	German ocean	- 3	00
Dover, England	- -	English channel	- 11	30
Downs, ditto	- -	German ocean	- 1	15
Dublin, Ireland	- -	Irish sea	- 9	15
Dunbar, Scotland	- -	German ocean	- 2	30
Dundee, ditto	- -	Ditto	- 2	15
Dungarvan, Ireland	-	Atlantic ocean	- 4	30
Dungenefs, England	-	English channel	- 9	45
Dunkirk, France	- -	German ocean	- 0	00
Dunnose, Isle of Wight	- -	English channel	- 9	45
Edinburgh, Scotland	- -	German ocean	- 4	30
Edystone, England	-	English channel	- 5	30
R. Elbe mouth, Germany	-	German ocean	- 0	00
Embden, ditto	- -	Ditto	- 0	00
Enchuyfen, Dutchland	- -	Zuyder sea	- 0	00

Estaples

Estaples, France	-	-	English channel	-	11	00
Falmouth, England	-	-	Ditto	-	5	30
Flamborough-head, ditto	-	-	German ocean	-	4	00
Cape Florida, Florida	-	-	Gulf of Mexico	-	7	30
Flushing, Dutchland	-	-	German ocean	-	0	45
Isle of Fly, ditto	-	-	Ditto	-	7	30
North Foreland, England	-	-	Ditto	-	9	45
South ditto, ditto	-	-	English channel	-	9	45
Foulness, ditto	-	-	German ocean	-	6	45
Foye, ditto	-	-	English channel	-	5	15
R. Garonne, France	-	-	Bay of Biscay	-	3	00
Gaspey bay, Arcadia	-	-	Gulf St. Lawrence	-	1	00
Gibraltar, Spain,	-	-	Mediterranean sea	-	0	00
Cape of Good Hope, Caffers	-	-	Indian ocean	-	3	00
Granville, France	-	-	English channel	-	7	00
Graveline, ditto	-	-	Ditto	-	0	00
Gravesend, England	-	-	R. Thames	-	1	30
Groine, or Cape Corrunna, Spain	-	-	Bay of Biscay	-	3	00
Isle of Guernsey, England	-	-	English channel	-	1	30
Hallifax, Nova Scotia	-	-	Western ocean	-	7	30
Hamburgh, Germany	-	-	River Elbe	-	6	00
Haarlem, Dutchland	-	-	German ocean	-	9	00
Hartlepool, England	-	-	Ditto	-	3	00
Harwich, ditto	-	-	Ditto	-	11	15
Havre de Grace, France	-	-	English channel	-	9	00
Cape Henry, Virginia	-	-	Atlantic ocean	-	11	15
Holyhead, Wales	-	-	Irish sea	-	1	30
Honfleur, France	-	-	River Seine	-	9	00
Hull, England	-	-	River Humber	-	6	00
R. Humber entrance, ditto	-	-	German ocean	-	5	13
Ice Cove, North Main	-	-	Hudson's straits	-	10	00
Fort St. John's, Newfoundland	-	-	Atlantic ocean	-	6	00
S. John de Luz, France	-	-	Bay of Biscay	-	3	30
Port St. Julian, Patagonia	-	-	South Atlantic ocean	-	4	45
Kentish Knock, England	-	-	German ocean	-	0	00
Isle of Kilduin, Lapland	-	-	North ocean	-	7	30
Kinfale, Ireland	-	-	Atlantic ocean	-	5	15
Land's-End, England	-	-	St. George's channel	-	7	30
Leith, Scotland	-	-	German ocean	-	4	30
Leostoffe, England	-	-	Ditto	-	9	45
Liverpool, ditto	-	-	Irish sea	-	11	15
Isle of Lewis, N. Port, Scotland	-	-	Western ocean	-	6	30

Lime

Lime, England	-	-	English channel	-	7	00
Lisbon, Portugal	-	-	River Tagus	-	2	15
Lizard, England	-	-	English channel	-	7	30
London, ditto	-	-	R. Thames	-	3	00
North London, New England	-	-	Western ocean	-	1	30
Long island, ditto	-	-	Ditto	-	3	00
Longsand-Head, England	-	-	German ocean	-	10	30
Isle of Lundy, ditto	-	-	St. George's channel	-	5	15
Lynn, ditto	-	-	German ocean	-	6	00
Isle of Madeira, Canaries	-	-	Atlantic ocean	-	12	04
R. Maes Mouth, Dutchland	-	-	German ocean	-	1	30
St. Maloe's, France	-	-	English channel	-	6	00
Isle of Man, west end, England	-	-	Irish sea	-	9	00
Margate, ditto	-	-	English channel	-	11	15
Milford, Wales	-	-	St. George's channel	-	5	15
Mount's Bay, England	-	-	English channel	-	4	30
Nantes, France	-	-	Bay of Biscay	-	3	00
Naze, Norway	-	-	Western ocean	-	11	15
Needles, England	-	-	English channel	-	10	15
Newcastle, ditto	-	-	German ocean	-	3	15
Nieuport, Flanders	-	-	Ditto	-	12	00
Nore, England	-	-	River Thames	-	0	00
North Cape, Lapland	-	-	Northern ocean	-	3	00
Orfordness, England	-	-	German ocean	-	9	45
Orkney isles, limits, Scotland	-	-	Western ocean	-	3	00
Ostend, Flanders	-	-	German ocean	-	12	00
Placentia, Newfoundland	-	-	Atlantic ocean	-	9	00
Plymouth, England	-	-	English channel	-	6	00
Portland, ditto	-	-	Ditto	-	8	15
Portsmouth, ditto	-	-	Ditto	-	11	15
Quebec, Canada	-	-	River St. Lawrence	-	7	30
Isle of Rhee, France	-	-	Bay of Biscay	-	3	00
Rochefort, ditto	-	-	Ditto	-	4	15
Rochelle, ditto	-	-	Ditto	-	3	45
Rocheſter, England	-	-	River Medway	-	0	45
Rotterdam, Dutchland	-	-	German ocean	-	3	00
Rouen, France	-	-	River Seine	-	1	15
Rye, England	-	-	English channel	-	11	15
Sandwich, ditto	-	-	Downs	-	11	30
Scarborough head, ditto	-	-	German ocean	-	3	45
Scilly isles, ditto	-	-	St. George's channel	-	3	45
R. Senegal, Negroland	-	-	Atlantic ocean	-	10	30
						R. Severn

R. Severn, England	-	St. George's channel	-	6	00
R. Seine, France	-	English channel	-	9	00
Sheerness, England	-	R. Thames	-	0	00
Sierra Leona, Guinea	-	Atlantic ocean	-	8	15
Shoreham, England	-	English channel	-	10	30
Isle of Shetland, limits, Scotland	-	Western ocean	-	3	00
Isle of Sky, ditto	-	Ditto	-	5	30
Southampton, England	-	English channel	-	0	00
Spurn, England,	-	German ocean	-	5	15
Start-Point, ditto	-	English channel	-	6	45
Stockton, ditto	-	German ocean	-	5	15
Strongford Bay, Ireland	-	Irish sea	-	10	30
Sunderland, England	-	German ocean	-	3	30
Swin, ditto	-	Entrance of the Thames	-	12	00
Tamarin Town, Sokotra	-	Indian ocean	-	9	00
R. Tees, mouth, England	-	German ocean	-	3	00
Isle of Teneriffe, Canaries,	-	Atlantic ocean	-	3	00
Isle of Texel, Dutchland	-	German ocean	-	7	30
R. Thames, mouth, England	-	Ditto	-	1	30
Tinmouth, ditto	-	German ocean	-	3	00
Topsham, ditto	-	English channel	-	6	00
Torbay, ditto	-	Ditto	-	5	15
Isle of Torey, Ireland	-	Western ocean	-	5	30
St. Valery, France	-	English channel	-	10	30
Vannes, ditto	-	Bay of Biscay	-	3	45
Isle of Ushant, France	-	English channel	-	3	30
Waterford, Ireland	-	St. George's channel	-	6	30
Weymouth, England	-	English channel	-	7	00
Whitby, ditto	-	German ocean	-	3	00
Isle of Wight, N. S. E. & W. end	-	English channel	-	0	00
Winchelsea, England	-	Ditto	-	0	45
Wintertonness, ditto	-	German ocean	-	9	00
Yarmouth, ditto	-	Ditto	-	9	45
York Fort, New Wales	-	Hudson's bay	-	9	10
New York, America	-	Atlantic ocean	-	3	00
Youghall, Ireland	-	St. George's channel	-	4	30

By the foregoing Table, the times of high water at all the places contained in it, may be found for ever. The first columns contain the names of all the places respectively; the second, the coasts of the sea by which they are bounded, and the figure column the hour and minute when it is *high water* at each of those places on the days of every New

and Full Moon, which will happen constantly the same for ever, because the Moon *souths*, or comes to the meridian of the same places every first and sixteenth day, i. e. at every first and third quarter, when she is new and full, and consequently the tides must return at the same intervals of time; therefore to know the time of high water on any given day, find the time of the Moon's southing, and then add the time which the Moon has passed the meridian at the full and change days, to make high water at that place; and the sum will be the time of high water on the given day. For example, at what time will it be high water at Portsmouth, on the 21st of October, 1789? Moon souths at 2h. 39m. to which add 3; and the sum 5h. 39m. shews that it will be high water at thirty-nine minutes past five o'clock in the afternoon. And so for any other place in the Table.

This theory of tides has been extended so far, as to estimate the tides, or elevations of the waters of the Moon, produced by the attraction of the earth: thus, let us suppose the quantity of matter (Q) in the earth to be to that in the Moon (q) as forty to one, that is, $Q : q :: 40 : 1$; and let us first suppose the earth and Moon of equal bulk, and represented by A I K, *fig.* 6. and B D E, and the force (F) of the earth, at the surface of the Moon B, will be to the force (f) of the Moon at the surface of the earth A, directly as the masses of matter in each (because of the equal distances T B and L A) that is, $F : f :: Q : q :: 40 : 1$. Again, let L B be to L C as the diameter of the earth to that of the Moon, which is as 365 to 100, then will the force at B be to the force at C as L B to L C, which let be as F to f , then $F : f :: 365 : 100$, whence $F = \frac{365f}{100}$; and above we have $F = 40f$, therefore $4000f = 365f$; and so $f : f :: 365 : 4000 :: 1 : 11$ nearly; that is, the power of the earth to raise the water at the Moon C, is to that of the Moon at the earth A as eleven to one, very nearly. If the Moon can raise the water here 10 feet, the earth can raise the water there to the height of 110 feet; but because the Moon always turns about her axis in the same time as she revolves about the earth, the waters (if any there be) will be raised on this and the opposite side, and always continue over the same part of the Moon's surface, so that there can be no different heights of water there, and consequently no tides, except what small ones may happen on account of the Sun's attraction, and her various inequalities of motion, and distance from the earth.

Of the W I N D S.

The Wind, *ventus*, is a sensible agitation of the air, whereby a large quantity thereof flows in a current or stream out of one place, or region, into another. The winds are divided into *perennial*, *stated*, and *variable*. They are also divided into *general*, and *particular*. Winds *perennial*, or *constant*, are such as always blow the same way. Of these we have a very notable one between the two tropics, blowing constantly from east to west; called the *general trade wind*. Winds *stated*, or *periodical*, are such as constantly return at certain times. Such are the sea and land breezes, blowing from sea to land in the evening; and from land to sea in the morning. Such also are the *shifting*, or *particular trade winds*, which, for certain months of the year, blow one way, and the rest of the year, the contrary way. Winds *variable*, or *erratic*, are such as blow now this, now that way; and are now up, now hushed, without any rule or regularity, either as to time or place. Such are all the winds observed in the inland parts of England, &c. though several of these claim their certain times of the day. Thus, the west wind is most frequent about noon; the south wind in the night; the north in the morning, &c. Wind *general*, is such a one, as at the same time blows the same way, over a very large tract of ground, almost all the year. Such only is the general trade wind. But even this has its interruptions: for, at land it is scarce sensible at all, as being broken by the interposition of mountains, valleys, &c. At sea near the shore, it is disturbed by vapours, exhalations, and particular winds blowing from landward; so that it is chiefly considered as general, only at mid sea: where, it is liable to be disturbed by clouds driving from other quarters. Winds *particular*, include all others, excepting the general trade winds. Those peculiar to one little canton, or part, are called *topical* or *provincial winds*. Such is the north wind, on the western side of the Alps, which does not blow above one or two leagues lengthwise, and much less in breadth: such also is the pontias in France, &c.

Some philosophers, as Des Cartes, Rohault, &c. account for the general wind, from the diurnal rotation of the earth; and from this general wind derive all the particular ones. The atmosphere, say they, investing the earth, and moving round it; that part will perform its circuit soonest, which has the smallest circle to describe: the air, therefore, near the equator, will require a somewhat longer time to perform its course in, from west to east, than that nearer the poles. Thus, as the earth turns eastward, the particles of the air near the equinoctial, being ex-
ceedingly

ceedingly light, are left behind ; so that, in respect of the earth's surface, they move eastwards, and become a constant easterly wind. This opinion seems confirmed by this, that these winds are found only between the tropics, in those parallels of latitude where the diurnal motion is swiftest. But the constant calms in the Atlantic sea, near the equator, the westerly winds near the coast of Guinea, and the periodical westerly monsoons under the equator in the Indian seas, declare the insufficiency of this hypothesis. Besides the air, being kept close to the earth by the principle of gravity, would, in time, acquire the same degree of velocity, that the earth's surface moves with, as well in respect of the diurnal rotation, as of the annual about the Sun, which is about thirty times swifter. Dr. Halley, therefore, substitutes another cause, capable of producing a like constant effect, not liable to the same objections, but agreeable to the known properties of the elements of water and air, and the laws of the motion of fluid bodies. Such a one is the action of the Sun's beams upon the air and water, as he passes every day over the ocean considered together with the quality of the soil, and the situation of the adjoining continents.

According to the laws of statics, the air which is less rarefied, or expanded by heat, and consequently is more ponderous, must have a motion towards those parts thereof, which are more rarefied, and less ponderous, to bring it to an equilibrium ; also the presence of the Sun continually shifting to the westward, that part to which the air tends, by reason of the rarefaction made by his greatest meridian heat, is, with him, carried westward ; and, consequently, the tendency of the whole body of the lower air is that way. Thus a general easterly wind is formed, which being impressed on the air of a vast ocean, the parts impel one the other, and so keep moving till the next return of the Sun, whereby so much of the motion as was lost, is again restored ; and thus the easterly wind is made perpetual. From the same principle it follows, that this easterly wind should, on the north side of the equator, be to the northward of the east, and in south latitudes to the southward thereof ; for near the line, the air is much more rarefied than at a greater distance from it ; because the Sun is twice in a year vertical there, and at no time distant above twenty-three degrees and a half ; at which distance the heat, being as the sine of the angle of incidence, is but little short of that of the perpendicular ray ; whereas under the tropics, though the Sun stays longer vertical, yet he is a long time forty-seven degrees off, which is a kind of winter, wherein the air so cools, as that the summer heat cannot warm it to the same degree with that under the equator. Wherefore, the air towards the north and south being less rarefied than that in the middle, it follows, that from both sides it ought to tend towards the equator.

This

This motion, compounded with the former easterly wind, accounts for all the phenomena of the general trade-winds, which, if the whole surface of the globe was sea, would undoubtedly blow quite round the world, as they are found to do in the Atlantic, and the Ethiopic oceans. But seeing that so great continents do interpose, and break the continuity of the ocean, regard must be had to the nature of the soil, and the position of the high mountains, which are the two principal causes of the variations of the wind, from the former general rule; for if a country lying near the Sun prove to be flat, sandy, and low land, such as the deserts of Lybia are usually reported to be, the heat occasioned by the reflexions of the Sun's beams, and the retention thereof in the sand, is incredible to those who have not felt it; whereby the air being extremely rarefied, it is necessary that the cooler and more dense air, should run thitherwards to restore the equilibrium. This is supposed to be the cause why, near the coast of Guinea, the wind always sets in upon the land, blowing westerly instead of easterly, there being sufficient reason to believe, that the inland parts of Africa are prodigiously hot, since the northern borders thereof were so very intemperate, as to give the ancients cause to conclude, that all beyond the tropics was uninhabitable by excess of heat.

Mr. Clare, in his Motion of Fluids, p. 302. mentions a familiar experiment, that serves to illustrate this matter, as well as the alternate course of land and sea breezes. Fill a large dish with cold water, and in the middle of it place a water-plate, filled with warm water: the first will represent the ocean, the other an island, rarefying the air above it. Then holding a wax-candle over the cold water, blow it out, and the smoke will be seen, in a still place, to move toward the warm plate, and rising over, it will point the course of the air, and also of vapour, from sea to land. And if the ambient water be warmed, and the plate filled with cold water, and the smoking wick of a candle held over the plate, the contrary will happen.

From the same cause it happens, that there are so constant calms in that same part of the ocean, called the *rains*; for this tract being placed in the middle, between the westerly winds blowing on the coast of Guinea, and the easterly trade winds blowing to the westward thereof; the tendency of the air here is indifferent to either, and so stands in equilibrio between both; and the weight of the incumbent atmosphere being diminished by the continual contrary winds blowing from hence, is the reason that the air here holds not the copious vapour it receives, but lets it fall in so frequent rains. But as the cold and dense air, by reason

of its greater gravity, presses upon the hot and rarefied, it is demonstrable, that this latter must ascend in a continued stream, as fast as it rarefies; and that, being ascended, it must disperse itself, to preserve the equilibrium; that is, by a contrary current, the upper air must move from those parts where the greatest heat is; so, by a kind of circulation, the north-east trade wind below, will be attended with a south-westerly wind above; and the south-east, with a north-west wind above.

That this is more than a bare conjecture, the almost instantaneous change of the wind to the opposite point, which is frequently found in passing the limits of the trade winds, seems strongly to assure us; but that which above all confirms this hypothesis, is the phenomenon of the monsoons, by this means most easily solved, and without it hardly explicable. Supposing, therefore, such a circulation as above, it is to be considered that to the northward of the Indian ocean there is every where land, within the usual limits of the latitude of 30° ; viz. Arabia, Persia, India, &c. which, for the same reason as the Mediterranean parts of Africa, are subject to insufferable heats, when the Sun is to the north, passing nearly vertical; but yet are temperate enough when the Sun is removed towards the other tropic, because of a ridge of mountains at some distance within the land, said to be frequently, in winter, covered with snow, over which the air, as it passes, must needs be much chilled. Hence it happens, that the air coming, according to the general rule, out of the north-east, to the Indian sea, is sometimes hotter, sometimes colder, than that which, by this circulation, is returned out of the south-west; and, by consequence, sometimes the under current, or wind, is from the north-east, sometimes from the south-west. That this has no other cause, is clear from the times wherein these winds set, viz. in April: when the Sun begins to warm these countries to the north, the south-west monsoons begin, and blow, during the heats, till October, when the Sun being retired, and all things growing cooler northward, and the heat increasing to the south, the north-east winds enter, and blow all the winter, till April again. And it is, undoubtedly, from the same principle, that to the southward of the equator, in part of the Indian ocean, the north-west winds succeed the south-east, when the Sun draws near the tropic of Capricorn. Phil. Transact. No. 183. or Abridg. vol. ii. page 139.

Some philosophers, dissatisfied with Dr. Halley's theory above recited, or not thinking it sufficient for explaining the various phenomena of the wind, have had recourse to another cause, viz. the gravitation of the earth and its atmosphere towards the Sun and Moon. They alledge that, though
we

we cannot discover ærial tides, of ebb or flow, by means of the barometer, because columns of air of unequal height, but different density, may have the same pressure or weight; yet the protuberance in the atmosphere, which is continually following the Moon, must, they say, of course produce a motion in all parts, and so produce a wind more or less to every place, which, conspiring with, or counteracted by the winds arising from other causes, makes them greater or less. Several dissertations to this purpose were published, on occasion of the subject proposed by the Academy of Sciences at Berlin, for the year 1746. M. Mûschenbroeck, however, will not allow that the attraction of the Moon is the cause of the general wind; because the east wind does not follow the motion of the Moon about the earth; for in that case there would be more than twenty-four changes, to which it would be subject in the course of a year, instead of two. Mr. Henry Eeles, apprehending that the Sun's rarefying of the air cannot simply be the cause of all the regular and irregular motions which we find in the atmosphere, ascribes them to another cause, viz. the ascent and descent of vapour and exhalation, attended by the electrical fire or fluid; and on this principle he has endeavoured to explain at large the general phenomena of the weather and barometer.

The industry of the above mentioned, and that of some of the later writers, have brought the theory of the production and motion of winds to somewhat of a mathematical demonstration, which is thus defined: If the spring of the air be weakened in any place, more than in the adjoining places; a wind will blow through the place where the diminution is. For, since the air endeavours, by its elastic force, to expand itself every way; if that force be less in one place than in another, the effort of the more, against the less elastic, will be greater than the effort of the latter against the former. The less elastic air, therefore, will resist with less force than it is urged by the more elastic; consequently, the less elastic will be driven out of its place, and the more elastic will succeed. If, now, the excess of the spring of the more elastic above that of the less elastic air, be such as to occasion a little alteration in the baroscope; the motion both of the air expelled, and that which succeeds it, will become sensible, i. e. there will be a wind. Hence, since the spring of the air increases, as the compressing weight increases, and compressed air is denser than air less compressed; all winds blow into rarer air, out of a place filled with a denser. Wherefore, since a denser air is specifically heavier than a rarer; an extraordinary lightness of the air in any place must be attended with extraordinary winds, or storms.

Now

Now, an extraordinary fall of the Mercury in the barometer, shewing an extraordinary lightness of the atmosphere, it is no wonder if that foretels storms. For if the air be suddenly condensed in any place, its spring will be suddenly diminished: hence, if this diminution be great enough to affect the barometer, there will a wind blow through the condensed air. But since the air cannot be suddenly condensed, unless it have before been much rarefied, there will a wind blow through the air, as it cools, after having been violently heated. In like manner, if air be suddenly rarefied, its spring is suddenly increased: wherefore, it will flow through the contiguous air, not acted on by the rarefying force. A wind, therefore, will blow out of a place, in which the air is suddenly rarefied; and on this principle, in all probability, it is, that, since the Sun's power in rarefying the air, is notorious, it must necessarily have a great influence on the generation of winds; which likewise penetrate the very bowels of the earth, since most caves and chasms are found to emit wind, either more or less. M. Muschenbroeck has enumerated a variety of causes that produce winds, existing in the bowels of the earth, on its surface, in the atmosphere, and above it. See *Intr. ad Phil. Nat.* vol. ii. page 1116, &c.

The rising and changing of the winds, are determined experimentally, by means of weather-cocks, placed on the tops of houses, &c. But these only indicate what passes about their own height, or near the surface of the earth: Wolfius assures us, from observations of several years, that the higher winds, which drive the clouds, are different from the lower ones, which move the weather-cocks. And Dr. Derham observes something not unlike this. *Phys. Theol.* lib. i. cap. 2. This author also relates, upon comparing several series of observations made of the winds in divers countries; viz. England, Ireland, Switzerland, Italy, France, New England, &c. that the winds in those several places seldom agree; but when they do, it is commonly when they are strong, and of long continuance in the same quarter; and more, he thinks in the northerly and easterly than in any other points. Also, that a strong wind in one place is oftentimes a weak one in another, or moderate, according as the places are nearer, or more remote. *Phil. Transf.* No. 267 and 321.

Philosophers have used various methods for determining the velocity of the wind, which is very different at different times. The method used by Dr. Derham was that of letting light downy feathers fly in the wind, and accurately observing the distance to which they were carried in any number of half seconds. This method he preferred to that of Dr. Hooke's *mola alata*, or *pneumatica*, (see *Phil. Transf.* No. 24. and *Birch's History of the Royal Society*, vol. iv. page 225.) He tells us, that he
thus

thus measured the velocity of the wind in the great storm of August, 1705, and by many experiments found, that it moved at the rate of thirty-three feet per half second, or of forty-five miles per hour: whence he concludes, that the most vehement wind (as that of November, 1703) does not fly at the rate of above fifty or sixty miles per hour, and that at a medium the velocity of wind is at the rate of twelve or fifteen miles per hour. Phil. Transf. No. 313. or Abr. vol. iv. page 411. Mr. Brice observes, that experiments with feathers are subject to uncertainty: as they seldom or ever describe a straight line, but describe a sort of spirals, moving to the right and left, and rising to very different altitudes in their progress. He, therefore, considers the motion of a cloud, or its shadow, over the surface of the earth, as a much more accurate measure of the velocity of the wind. In this way he found, that the wind, in a considerable storm, moved at the rate of 62.9 miles per hour; and that, when it blew a fresh gale, it moved in the same time about twenty-one miles; and that in a small breeze, the wind moved at the rate of 9.9 miles per hour. Phil. Transf. vol. lvi. page 226.

A T A B L E of the different Velocities and Forces of the W I N D S.

Velocity of the Wind.		Perpendicular force on one square foot in avoirdupois pounds.	Common appellations of the forces of winds.
Miles in one Hour.	= feet in one second.		
1	1.47	.005	Hardly perceptible.
2	2.93	.020	Just perceptible.
3	4.40	.044	
4	5.87	.079	Gentle pleasant wind.
5	7.33	.123	
10	14.67	.492	Pleasant brisk gale.
15	22.00	1.107	
20	29.34	1.968	Very brisk
25	36.67	3.075	
30	44.01	4.429	High wind.
35	51.34	6.027	
40	58.68	7.873	Very high.
45	66.01	9.963	
50	73.35	12.300	A storm or tempest.
60	83.62	17.715	A great storm.
80	117.36	31.490	A hurricane.
100	146.70	49.200	A hurricane that tears up trees, and carries buildings, &c. before it.

The force of the wind is as the square of its velocity; as Mr. Ferguson has shewn by experiments on the whirling table; and in moderate velocities this will hold very nearly. It is observed, with regard to this table, that the evidence for those numbers, where the velocity of the wind exceeds fifty miles an hour, does not seem of equal authority with that of those of fifty miles, or under. Phil. Transf. vol. li. page 165. Dr. Hales found (Statical Eff. vol. ii. page 326.) that the air rushed out of a pair of smith's bellows, at the rate of 68.73 feet in a second of time, when compressed with a force equal to the weight of one inch perpendicular depth of mercury, lying on the whole upper surface of the bellows. The velocity of the air, as it passed out of the trunk of his ventilators, was found to be at the rate of three thousand feet in a minute; which is at the rate of thirty four miles in an hour. Dr. Hales says, that the velocity with which impelled air passes out at any orifice, may be determined by hanging a light valve over the nose of a bellows, by pilant leathern hinges, which will be much agitated and lifted up from a perpendicular to a more than horizontal position by the force of the rushing air. There is another more accurate way, he says, of estimating the velocity of air, viz. by holding the orifice of an inverted glass siphon full of water, opposite to the stream of air, whereby the water will be depressed in one leg, and raised in the other, in proportion to the force with which the water is impelled by the air.

As to the qualities and effects of the wind, it is to be observed, that a wind blowing from the sea, is always moist: in Summer, it is cold; and in Winter, warm, unless the sea be frozen up. This is demonstrated thus: there is a vapour continually rising out of all water (as appears even hence, that a quantity of water, being left a little while in an open vessel, is found sensibly diminished) but especially if it be exposed to the Sun's rays; in which case the evaporation is beyond all expectation. By this means, the air incumbent on the sea becomes impregnated with a quantity of vapour. But the winds, blowing from off the sea, sweep these vapours along with them; and consequently they are always moist. Again, water in Summer, &c. conceives less heat than terrestrial bodies, exposed to the same rays of the Sun, do; but in winter, sea-water is warmer than the earth covered with frost and snow, &c. Wherefore, as the air contiguous to any body is found to partake of its heat and cold, the air contiguous to sea-water will be warmer in winter, and colder in Summer, than that contiguous to the earth. Or thus: vapours raised from water by the Sun's warmth in Winter, are warmer than the air they rise in (as appears from the vapours condensing, and becoming visible, almost as soon as they are got out into air.) Fresh quantities of vapour, therefore,

therefore, continually warming the atmosphere over the sea, will raise its heat beyond that of air over the land. Again, the Sun's rays reflected from the earth into the air, in Summer, are much more than those from the water into air: the air, therefore, over the earth, warmed by the reflexion of more rays than that over water, is warmer. Hence, sea winds make thick, cloudy, hazy weather.

Winds blowing from the continent, are always dry; in Summer, warm; and cold in Winter. For there is much less vapour arising from the earth, than from water; and therefore the air over the continent will be impregnated with much fewer vapours. Add, that the vapours, or exhalations, raised by a great degree of heat out of the earth, are much finer, and less sensible, than those from water. The wind, therefore, blowing over the continent, carries but little vapour with it, and is therefore dry. Farther, the earth in Summer is warmer than water exposed to the same rays of the Sun. Hence, as the air partakes of the heat of contiguous bodies, that over the earth in Summer will be warmer than that over the water. After the like manner it is shewn, that the land winds are cold in Winter. Hence, we see why land winds make clear, cold weather. Our northerly and southerly winds, however, which are commonly esteemed the causes of cold and warm weather, Dr. Derham observes, are really rather the effect of the cold or warmth of the atmosphere. Hence it is, that we frequently see a warm southerly wind, on a sudden, changed to the north, by the fall of snow or hail; and that in a cold, frosty morning, we see the wind north, which afterwards wheels about toward the southerly quarter, when the Sun has well warmed the air; and again, in the cold evening, turns northerly or easterly.

The utility of winds has been universally acknowledged. The ancient Persians, Phœnecians, Greeks, and Romans, sacrificed, and erected temples to the winds; as we learn from Vossius, *Theolog. Gentil. lib. iii. part i. cap. 1.* Beside their use in moving bellows, mills, and other machines, applied in various ways to the service of mankind, and the benefits resulting from them to navigation and trade, they serve to purify and refresh the air, to convey the heat or cold of one region to another, to produce a regular circulation of vapours from the ocean to countries remote from it, and to supply, by wafting them in their progress against hills, &c. springs and rivers.

Wind has been, by many authors, made the basis of many different diseases: among others, Dr. Reyn has given it as his opinion, in a *Treatise on the Gout (De Arthritid.)* that flatulæ, or wind inclosed between

tween the periosteum and the bone, are the true cause of that disease; and accordingly, that all the methods of cure ought to tend to the expelling of that wind. He supposes this wind to be of a dry, cold, and malignant nature, conveyed by the arteries to the place affected, where forcibly separating that sensible membrane, the periosteum, and distending it, the pain must needs be very great. He is also of opinion, that head-achs, palpitations of the heart, tooth-ach, pleurisy, convulsions, colics, and many other diseases, are originally owing to the same cause, and only differ in regard to the place affected, and to the various motions and determinations of the wind. The moveableness of the pain in gouty persons from one part to another, he looks upon as a proof of this, and thinks that the curing of the gout by burning moxa, or the cotton of the mugwort leaves, upon it, is owing to its giving way to the wind in the part to evaporate itself. That these winds are cold appears from the shivering fits which generally precede a paroxysm of the gout, and that the shiverings in the beginning of fevers, and before all fits of agues, are owing to the same cause, is supposed by this author a natural conclusion from the former observations.

The winds according to this author, and Fienus, are a sort of halituous spirits, raised by the improper degree of our native heat, or out of our meat and drink; or, finally, out of an abundance of black choler. Their differences, he says, principally proceed from the various ferments producing in us a variety of humours; which, acting upon one another, do in their effervescences create winds of various effects, and denominate diseases from the places which are the scenes of their action. It is on this account that the acupunctura, or pricking with long needles, among the Chinese, is of use: the Japanese, and other neighbouring nations, having no other cure for most diseases than the pricking with the needle, and the burning of the moxa on the part.

The husbandman often suffers extremely by high winds, in many different respects. Plantations of trees at a small distance from the barns and houses, are the best safeguard against their suffering by winds; but they must not be planted so near as that their fall, if it should happen, would endanger them. Yews grow very slowly, otherwise they are the best of all trees for this defensive plantation. Trees suffer by winds, being either broken or blown down by them; but this may be in a great measure prevented by cutting off great part of the heads and branches of them, in places where they stand most exposed. Hops are the most subject to be injured by winds of any crop; but this may be in a great measure prevented by a high pale or very thick thorn-hedge; this will both keep off the

the spring wind, which nips the young buds, and be a great safeguard against other winds that would tear the plants from their poles. The poles should always be very firm in the ground; and the best security to be added to this, is a row of tall trees all round the ground. Winds attended with rain do great injury to the corn, by laying it flat to the ground. The best method of preventing this, is to keep up good enclosures; and if the accident happens, the corn should be cut immediately, for it never grows at all afterwards. It should be left on the ground, in this case, some time after the cutting, to harden the grain in the ear.

Many valuable observations on the winds, as they relate to navigation, have been made by skilful seamen, and particularly by Dr. Halley. It is found, that between the limits of 60 degrees, viz. from 30 degrees of north latitude to 30 degrees of south latitude, there is a constant east wind through the year, blowing in the Atlantic and Pacific oceans, called the trade wind. These trade winds, near their northern limits blow between the north and east; and near their southern limits they blow between the south and east; but their general motions are disturbed on the continents, and near their coasts. In some parts of the Indian ocean there are periodical winds, which are called monsoons.

In the Atlantic ocean, near the coasts of Africa, at about a hundred leagues from the shore, between the latitude of 28 degrees and 10 degrees north, seamen constantly meet with a fresh gale of wind blowing from the N. E. Those bound to the Caribbee islands, across the Atlantic ocean, find as they approach the American side, that the said N. E. wind becomes easterly; or seldom blows more than a point from the east, either to the northward or southward. These trade winds, on the American side, are extended to 30, 31, or even to 32 degrees of N. latitude; which is about 4 degrees farther than they extend to on the African side: also to the southward of the equator, the trade winds extend three or four degrees farther to the coast of Brasil, on the American side, than they do near the Cape of Good Hope, on the African side.

Between the latitudes of 4 degrees N. and 4 degrees S. the wind always blows between the south and east: on the African side the winds are nearest the south; and on the American side, nearest the east. In these seas Dr. Halley observed, that when the wind was eastward, the weather was gloomy, dark and rainy, with hard gales of wind; but when the wind veered to the southward, the weather generally became serene, with gentle breezes, next to a calm. These winds are somewhat changed

by the seasons of the year ; for when the Sun is far northward, the Brazilian S. E. wind gets to the south, and the N. E. wind to the east ; and when the Sun is far south, the S. E. wind gets to the east, and the N. E. winds on this side of the equator veer more to the north.

Along the coast of Guinea, from Sierra Leone to the island of St. Thomas, under the equator, which is above five hundred leagues, the southerly and south-west winds blow perpetually ; for the S. E. trade wind, having passed the equator, and approaching the Guinea coast within eighty or a hundred leagues, inclines toward the shore, and becomes south, then S. E. and by degrees, as it comes near the land, it veers about to south, S. S. W. and in with the land it is S. W. and sometimes W. S. W. This tract is troubled with frequent calms, violent sudden gusts of wind, called tornadoes, blowing from all points of the horizon.

Between the fourth and tenth degrees of north latitude, and between the longitudes of Cape Verd, and the easternmost of the Cape Verd isles, there is a tract of sea subject to perpetual calms, attended with frequent thunder and lightning, and rains : ships in sailing these six degrees are said to have been sometimes detained whole months.

The three last observations account for two circumstances which mariners experience in sailing from Europe to India, and in the Guinea trade. The first is, the difficulty which ships, in going to the southward, especially in the months of July and August, find in passing between the coasts of Guinea and Brazil, although the breadth of this sea is more than five hundred leagues. This happens, because the S. E. winds at that time of the year commonly extend some degrees beyond the ordinary limits of four degrees N. latitude ; and besides coming so much southerly, as to be sometimes south, sometimes a point or two to the west ; it then only remains to ply to windward : and if, on the one side, they steer W. S. W. they get a wind more and more easterly ; but then there is a danger of falling in with the Brazilian coast, or shoals ; and if they steer E. S. E. they fall into the neighbourhood of the coast of Guinea, from whence they cannot depart without running easterly as far as the island of St. Thomas ; and this is the constant practice of all the Guinea ships. Secondly. All ships departing from Guinea for Europe, their direct course is northward ; but on this course they cannot go, because the coast bending nearly east and west, the land is to the northward : therefore as the winds on this coast are generally between the S. and W. S. W. they are obliged to steer S. S. E. or south, and with these courses they run off the shore ; but in so doing they always find the winds more and more contrary ;

trary; so that when near the shore, they can lie south, at a greater distance they can make no better than S. E. and afterwards E. S. E.; with which courses they commonly fetch the island of St. Thomas and Cape Lopez, where finding the winds to the eastward of the south, they sail westerly with it, till coming to the latitude of four degrees south, where they find the S. E. winds blowing perpetually. On account of these general winds, all those that use the West India trade, even those bound to Virginia, reckon it their best course to get as soon as they can to the southward, that so they may be certain of a fair and fresh gale to run before it to the westward; and for the same reason those homeward-bound from America endeavour to gain the latitude of thirty degrees, where they first find the winds begin to be variable; though the most ordinary winds in the north Atlantic ocean come from between the south and west.

Between the southern latitudes of ten and thirty degrees in the Indian ocean, the general trade wind about the S. E. by S. is found to blow all the year long in the same manner as in the like latitude in the Ethiopic ocean; and during the six months from May to December, these winds reach to within two degrees of the equator; but during the other six months, from November to June, a N. W. wind blows in the tract lying between the third and tenth degrees of southern latitude, in the meridian of the north end of Madagascar; and between the second and twelfth degree of south latitude, near the longitude of Sumatra and Java.

In the tract between Sumatra and the African coast, and from three degrees of south latitude quite northward to the Asiatic coasts, including the Arabian sea and the gulf of Bengal, the monsoons blow from September to April on the N. E.; and from March to October on the S. W. In the former half year the wind is more steady and gentle, and weather clearer than in the latter six months; and the wind is more strong and steady in the Arabian sea than in the gulf of Bengal.

Between the Island of Madagascar and the coast of Africa, and thence northward as far as the equator, there is a tract, wherein from April to October there is a constant fresh south southwest wind; which to the northward changes into the west southwest wind, blowing at that time in the Arabian sea.

To the eastward of Sumatra and Malacca on the north of the equator and along the coasts of Cambodia and China, quite through the Philippines as far as Japan, the monsoons blow northerly and southerly; the
northern

northern setting in about October or November, and the southern about May: the winds are not quite so certain as those in the Arabian seas.

Between Sumatra and Java to the west, and New Guinea to the east, the same northerly and southerly winds are observed; but the first half year monsoon inclines to the N. W. and the latter to the S. E. These winds begin a month or six weeks after those in the Chinese seas set in, and are quite as variable. These contrary winds do not shift from one point to its opposite all at once; in some places the time of the change is attended with calms, in others by variable winds; and it often happens on the shores of Coromandel and China, towards the end of the monsoons, that there are most violent storms, greatly resembling the hurricanes in the West Indies; wherein the wind is so very strong, that hardly any thing can resist its force. All navigation in the Indian ocean must necessarily be regulated by these winds; for if mariners should delay their voyages till the contrary monsoon begins, they must either fail back, or go into harbour, and wait for the return of the trade wind. See Phil. Transf. No. 183, or Abr. vol. ii. page 133, &c. Robertson's Elem. of Nav. book vi. sect. 6.

The winds are divided, with respect to the points of the horizon from which they blow, into *cardinal* and *collateral*. Winds *cardinal*, are those blowing from the four cardinal points; east, west, north, and south. Winds *collateral*, are the intermediate winds between any two cardinal winds. The number of these is infinite, as the points from which they blow are; but only a few of them are considered in practice; i. e. only a few of them have their distinguishing names. The ancient Greeks, at first, only used the four cardinal ones; at length they took in four more. Vitruvius gives us a table of twenty, besides the cardinals, which were in use among the Romans. The moderns, as their navigation is much more perfect than that of the ancients, have given names to twenty-eight collateral winds; which they range into *primary* and *secondary*; and the secondary they subdivide into those of the *first* and *second* order. The English names of the primary collateral winds and points are compounded of the names of the cardinal ones, north and south being still prefixed. The names of the secondary collateral winds of the first order are compounded of the names of the cardinals, and the adjacent primary one. Those of the second order are compounded of the names of the cardinal, or the next adjacent primary; and the next cardinal, with the addition of the word *by*. The Latins have distinct names for each; all which are expressed in the following table.

NAMES

NAMES of the WINDS, and POINTS of the C O M P A S S.		Distances of the points, &c. from the north.	
English.	Latin and Greek		
1. <i>NORTH.</i>	<i>Septentrio, or Boreas.</i>	09	0'
2. North-by-east.	<i>Hyperboreas.</i> <i>Hypaquilo.</i> <i>Gallicus.</i>	11	15
3. North-north-east.	<i>Aquilo.</i>	22	30
4. North-east by north.	<i>Mesoboreas.</i> <i>Mesaquilo.</i> <i>Supernas.</i>	33	45
5. North-east.	<i>Arctapeliotes.</i> <i>Borapeliotes.</i> <i>Græcus.</i>	45	
6. North-east by east.	<i>Hypocæfias.</i>	56	15
7. East-north-east.	<i>Cæfias, Hellespontius.</i>	67	30
8. East-by-north.	<i>Metocæfias.</i> <i>Carbas.</i>	78	45
9. <i>EAST.</i>	<i>Solanus, subsolanus,</i> <i>opeliotes.</i>	From the East.	
10. East-by-south.	<i>Hypeurus, or hyper-</i> <i>eurus.</i>	0°	0'
11. East-south-east.	<i>Eurus, or voltumnus.</i>	11	15
12. South-east-by-east.	<i>Meseurus.</i>	22	30
13. South-east.	<i>Notapeliotes, eurafter.</i>	33	45
14. South-east by south.	<i>Hypophœnix.</i> <i>Phœnix, phœnicias,</i>	45	
15. South-south-east.	<i>leuco-notus, gan-</i> <i>geticus.</i>	56	15
16. South-by-east.	<i>Mesophœnix.</i>	67	30
		78	45

NAMES of the WINDS, and POINTS of the C O M P A S S.		Distance of the Points &c. from the South.	
English.	Latin and Greek.		
17. SOUTH.	<i>Auster, notus, meridies.</i>	0°	0'
18. South-by-west.	<i>Hypolibonotus, alfa- nus.</i>	11	15
19. South-south-west.	<i>Libonotus, notoliby- cus, austro-africus.</i>	22	30
20. South-west by south.	<i>Mesolibonotus.</i>	33	45
21. South-west.	<i>Noto-zephyrus. Noto-libycus. Africus.</i>	45	
22. South-west by west.	<i>Hypolibis. Hypafricus. Subvesperus.</i>	56	15
23. West-south-west.	<i>Libis.</i>	67	30
24. West-by-south.	<i>Mesolibis. Mefozephyrus.</i>	78	45
		From the West.	
25. WEST.	<i>Zephyrus, favonius, oc- cidens.</i>	0°	0'
26. West-by-north.	<i>Hypargestes. Hypocorus.</i>	11	15
27. West-north-west.	<i>Argestes. Caurus, corus, iapyx.</i>	22	30
28. North-west by west.	<i>Mefargestes. Mefocorus.</i>	33	45
29. North-west.	<i>Zephyro-boreas, boroli- bycus, olympias</i>	45	
30. North-west by north.	<i>Hypocircius. Hypothrafcias. Scirem.</i>	56	15
31. North-north west.	<i>Circius, thrafcias.</i>	67	30
32. North-by-west.	<i>Mefocircius.</i>	78	45

APPLICATION of all the foregoing PHENOMENA, in NATURAL
and METEOROLOGICAL A S T R O L O G Y.

Having described the nature and properties of meteorolic appearances, and explained the phenomena of eclipses, comets, &c. with the motions and attractions of the earth, Moon, and Sun, as they affect the tides, winds, and atmosphere, we shall now consider their influence, jointly with that of the other planets and stars, in producing the continual changes and mutations in the general affairs of states and empires; and in the variations and changes of the weather, whereby plagues and pestilences, droughts and inundations, and the consequent calamities of sickly and distressful times, are sought out and predicted; for all having the same primitive cause, namely, the attractive power and influence of the planetary system upon the elementary and terrestrial matter, they are alike definable from a contemplation of the occult properties of that celestial influx, which this department of the astrologic science has in all ages been found to teach.

From what has been premised concerning the foregoing phenomenæ, it becomes evident, that whatever affects the state of the air or atmosphere, must necessarily, in an adequate proportion, alter the state of the weather; and that by how much the more the elements are impregnated or charged with electrical matter; or that the motions of the winds are increased or diminished; or that the clouds are surcharged with moist and discordant vapours, by so much the more will stormy, tempestuous, and unsettled weather be produced. So likewise, it is equally demonstrable, that as the temperature of the air, and the state of the ambient and elementary matter, is from time to time varied and changed, or surcharged to a greater or lesser excess with any particular quality, so in a proportionate degree will the animal functions and spirits of men be raised or depressed, their minds agitated, and their passions inflamed; whence arise putrid and malignant complaints throughout whole provinces, and discord and malevolence among the different governments and orders of society. And seeing these things are so, that their causes are brought about by the attractions and mutations of the Sun, Moon, and stars, in their different motions and positions, and in their conjunctions and oppositions, and various configurations among themselves and with the earth; and since we have seen that these motions and positions of the planets, and all their different aspects, can be ascertained for any series of years to come; so it is manifest, that by knowing their influences and effects upon the air, earth, winds, and elements; and upon the

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constitutions and passions of men; a presage of times and seasons, of famines, pestilences, inundations, and of all great and universal calamities arising therefrom, is sought out, and indisputably established.

This speculation is therefore defined to be, the art of prognostication by the rules of *astronomy*. It is divided into two principal or distinct parts; the one whereof is called *general* or *universal*, because it relates to whole empires, nations, or provinces; and the other *local* or *particular*, since it relates only to the *weather* applicable to particular and distinct climates; which, from the foregoing theory of eclipses, tides, and winds, it is manifest, might be ascertained with very great degrees of exactness.

In these considerations, two things are to be regarded, as the principal ground-work of the whole, namely, the *tendency* and *familiarity* of the twelve signs of the zodiac, and the planets and stars, to the temperature of the different *climates*; and the qualities produced in certain seasons by the ecliptical conjunctions of the Sun and Moon, and by the revolutions and transits of the planets, with their risings and stations. The first, and greater cause, hath respect unto whole regions, and sheweth the uncertainty of national glory and perfection, so liable to be disturbed by wars and intestine broils, or destroyed by famine, pestilence, earthquakes, or inundations. The secondary, or inferior cause, is produced in certain times, as in the contrariety of seasons, and their mutations more or less in their different quarters; as heats or winds more vehement or remiss, out of their proper and accustomed times, whereby plenty or scarcity, or diseases are produced, as the cause and quality shall happen to be. Hence are discovered the sympathies existing between the motions and configurations of the planets, and between the mutations and varieties of weather observable in the same seasons of the year; and of the general good or evil attendant on mankind, all which are here accounted for, according to the principles of natural reason. For it is an undeniable fact, that every distinct property, will have its distinct effect; and that the knowledge of these effects, point out the property, whether it be good or evil. Thus we know, that the property of the planets ruling particular seasons, as the Moon does the tides, will constantly produce the same effect, when unimpeded with the property or influence of other attractive bodies; for then the effective property is changed, and can only be determined by contemplating the proper force and mixture of the different planets, according to their co-operation and power, or places in the zodiac.

In this speculation, likewise, not only the natures and mixtures of the planets amongst themselves, are to be observed, but also the mixtures of those
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those qualities which communicate their properties to the planets and signs; such as the more powerful influences of the Sun and Moon, and the parallels of attraction made with the earth. But when any of the planets act distinctly of themselves, regard must solely be had to their own proper government and quality. Therefore, if the star of Saturn rules alone, he causeth corruptions by cold, conspiracies in states, with discontents and sedition. But the influx which properly seizeth men, engendering cold and crude matter, produces chronical diseases and consumptions, colloquations, rheumatisms, cold moist distempers, agues, epidemic fevers, defluxions, &c. which will be the general or prevailing complaints in those countries over which this planet bears rule, and where his parallels or aspects *in mundo* are visibly made. With respect to the political government of those countries, it stirs up dissensions amongst kings and princes, begets violence and contention betwixt magistrates and rulers, and anarchy and confusion amongst the people; it forebodes war, sorrow, and desolation, and often terminates in the overthrow of states, and in the death of princes. Among irrational animals, it mostly seizeth those of the domestic kind, producing the distemper in horses and dogs, the rot in sheep, and the murrain amongst horned cattle. Its effect upon the atmosphere will produce misty, dark, close, humid, lowering, corruscuous weather; or else turbulent, and violently intemperate; or extremely intense cold durable frosts and snow, as the clime and season of the year shall chance to be. Hence will arise inundations of waters, shipwrecks and distress at sea, and drowning, or freezing to death on land. The fruits of the earth will be diminished, and chiefly those which are most needful for the sustenance of man, will totally fail, being struck with blight, smut, blast, and mildew, or overcome with floods, rain, hail, snow, or frosts; so that the evil begets a paucity of the necessaries of life, and proceeds to famine.

If Jupiter *alone* be lord of the year, he influences all things to the greatest good. Amongst men will be a time of blessedness, vigour, and uninterrupted health; of long and happy days, of tranquillity and peace. Those things which are necessary for man's use and benefit are nourished and augmented, and all nature tends both to mental and corporeal good. In political events those countries more immediately under his dominion and influx, will be the most happy and prosperous; the affairs of state will tend to the promotion of national wealth, magnanimity, and honour; the government will be mild, and the laws dispensed with justice and moderation; there will be mutual agreement between kings and princes, and an universal disposition to peace; alliances will be formed for the prosperity of the people, and trade and commerce will flourish under

them. The increase amongst irrational animals of the domestic and useful kind, will be great, and men will be enriched thereby, particularly such as deal in sheep and black cattle. The constitution of the air will be mild and healthful, tempered with gentle winds, and refreshing showers, whereby the fruits of the earth will be replenished, and seed-time and harvest, and heat and cold, succeed each other in their proper and accustomed seasons. The elements participating in a more equal mixture of their qualities, will be less disturbed; lakes and rivers swell only to a moderate height, so as to increase fertility and vegetation. The restless ocean, now unassailed by turbid storms and winds, affords safe passage to the rich freighted ships; from every quarter of the globe. In short, under the unimpeded influence of this benign star, the productions of the earth will be poured forth in abundance, and all things contribute their store for the health and prosperity of man.

Mars having *alone* the dominion of the year, produces those evils resulting spontaneously from his nature, which is that of intemperate heat and drought. Menkind will hence be seized with violent corruptions of the blood, apoplexies, and sudden deaths. Spotted and scarlet fevers will abound principally in those countries over which he presides, and where his mundane aspects most forcibly pervade the earth; for there will his noxious influence prove most fatal. Political affairs, under this influx, are marked with violence and oppression. Wars break out between contending princes, and fire and sword desolates the country, and levels all before it. Intestine broils, insurrections, treason, and murder, stain the land with innocent blood, and complete the sad catalogue of human misfortunes. The brute creation, and particularly those appropriated for the food and service of man, will be grievously afflicted, epidemic disorders will break out amongst them; and the heat and drought will prove extremely fatal to horses. The fruits of the earth will be burnt up, fodder and grass for cattle every where destroyed, and all vegetation in a manner suspended. Rivers, lakes, and ponds will be dried up, the springs of the earth exhausted; and, at the rising of the *dog-star*, nature, as it were, will sicken, and respiration be difficult and faint; dogs will run mad, and epidemic contagion spread throughout whole empires. The sea, in a manner stagnated with calms, will put navigation and commerce almost to a stand, whereby a dearth of corn, and other necessities of life, will be felt in many countries, and pave the way to the severest ravages of pestilence and plague.

The *sole* rule and government of Venus, will draw our attention from this waste and barren wild, to a scene more grateful and pleasing. Under
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her mild and gentle sway, all nature inclines to moderation and delight. The influx which seizeth men, will dispose them to cultivate the blessings of peace, and conciliate the jarring interests of contending states. Fruitfulness and fecundity will bless the land; the minds of men will be softened by the all-subduing charms of the smiling fair, whose benignant influences harmonize society, and presage the golden æra of felicitous and happy marriages, harbingers of joy, of children, and delight. Political affairs will now grow mild and peaceful; and the minds of monarchs more inclined to negotiations for family alliances and the chains of wedlock, than to enforce the savage rage of war, and painful shackles of imprisonment or slavery. All animated nature will increase and multiply, and the creatures which do not fly the dominion of man, will be healthful and profitable. The state of the air will be prolific and serene, tempered with refreshing showers, and salubrious winds, producing heavy and luxuriant crops of all the fruits of the earth. Ships sail brisk and safely at sea, and the produce of different climes are wafted from shore to shore, trebling their value. The springs and rivers murmur through the groves, pouring o'er their mossy banks the beverage of fatness on the verdant plains, smiling in all the variegated dress of blooming Spring. The alternate seasons will succeed, without turbulent or violent excess; and the delicious fruits and ripened corn, gathered into the garner in plenty and perfection, will influence the minds of men, while sitting in safety and peace under their own vine and their own fig-tree, to pour out to a bountiful and gracious PROVIDENCE, the unbounded effusions of pious and grateful hearts.

When Mercury hath alone the dominion, and not allured to the quality of other bodies by the force of attraction, or the mutability of his own nature, he quickens the minds of men, and disposes to industry and invention. The constitution of the air under him will be active and unsettled, frequently changing in the space only of a few hours; and by reason of his proximity to the Sun, when in his swiftest motion, he occasions drought, and disturbs the ambient by generating winds and vapours, thunder, lightning, coruscations, and dark lowering clouds; and on this account he induceth corruption in animals and plants, particularly such as are most useful and profitable to man. In matters of state policy and government, he infuses artifice and cunning into the conduct of princes, gives sagacity to ministers, and dispatch to the deliberations of council; he promotes the liberal arts, and forwards the improvement of science, disposing all men to sobriety, perseverance, and labour. In voyages and navigation, the influx of this planet is not very propitious, since it occasions sudden and violent storms, and perpetual changes of the
wind.

wind. Lakes and rivers, under this dominion, swell on a sudden to immoderate heights; break down their banks, and carry away their bridges; inundate the country for miles round, and lay whole towns under water; these again, as suddenly subside, and droughts frequently ensue. Hence the diseases engendered will be quotidian agues, violent colds and coughs, eruptions of blood, asthmas, and consumptions. In the occidental quadrants he diminisheth the waters, and in the oriental he increaseth them. Under this influence, therefore, when it acts alone, men will experience a mediocrity of good and evil; the fruits of the earth will in general be sufficient, but vary much in quality and value, according to the mutation of the weather, and as the blights and rains shall have been more or less general or partial. Peace will for the most part prevail under this governance; since the animosities of princes will be more likely to cool by negotiation, than be inflamed or exhausted by the devastations of war.

Thus each planet, according to its nature, quality, and force, produceth these things, when left to its own proper action and effect, unmixed with the influx of other bodies, and the beams and copulations of the luminaries unopposing, nor corresponding thereto. But when one star is mixed with another by aspect, or by familiarity in signs, then the effect will happen according to the mixture and temperament arising from the communication of those mixtures, which being as it were manifold and infinite, from the number and diversities of other stars and aspects, they can only be ascertained by attentive calculations, founded on mathematical precepts. And in our judgment of events which appertain to certain districts, we ought most attentively to weigh the *familiarities* of those planets which bring up the event; for if the planets are benefics, and conformed to the region upon which the effect falls, and are not overcome by contraries, they more powerfully produce the benefit according to their proper nature; as on the contrary, they are of less advantage, if any impediment happens in the familiarity, or their influence be overcome by opposing aspects. So again, if the ruling stars of the events are malefics, and have familiarity with the regions on which the accident falls, or are overcome by contraries, they do less harm; but if they have no familiarity with those countries, nor are overcome by them that have familiarity therewith, they do much greater harm. As to their effects upon the diseases of men, they are seized by more universal affections, having the seeds thereof in their nativities, and receive by sympathy in their constitutions, the more sensible operation of these general accidents. These considerations form the grand outline of this department of astrology; from which particulars are alone deducible.

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Seeing, therefore, that this speculation comprizes two different and distinct subjects, namely, the general state of the weather; and, secondly, the mutations and revolutions of Countries and Empires: it will be proper to consider them upon the basis already laid down, under their respective and particular heads; and, first,

Of the W E A T H E R.

As it is in the air or atmosphere that all plants and animals live and breathe, and as that appears to be the great principle of most animal and vegetable productions, alterations, &c. there does not seem any thing in all philosophy, of more immediate concernment to us, than the state of the *weather*. In effect, all living things are only assemblages, or bundles of vessels, whose juices are kept moving by the pressure of the atmosphere; and which, by that motion, maintain life. So that any alterations in the rarity or density, the heat, purity, &c. of that, must necessarily be attended with proportionable ones in these. What great, yet regular alterations, a little change of weather makes in a tube filled with mercury, or spirit of wine, or in a piece of string, &c. every body knows, in the common instance of barometers, thermometers, hygrometers, &c. and it is owing partly to our inattention, and partly to our unequal, intemperate course of living, that we do not feel as great and as regular ones in the tubes, chords, and fibres, of our own bodies. It is certain, a great part of the brute creation have a sensibility, and sagacity, this way, beyond mankind; and yet, without any means or disposition thereto, more than we; except that their vessels, fibres, &c. being, in other respects, in one equable habitude; the same or a proportionable cause from without, has always a like, or proportionable effect on them; that is, their vessels are regular barometers, &c. affected only from one external principle; viz. the disposition of the atmosphere; whereas ours are acted on by divers from within, as well as without: some of which check, impede, and prevent the action of others. But to ascertain the limits of these various affections, requires a theory of the weather founded on astrological and mechanical principles.

To obtain a proper knowledge of the weather for any given year, it is requisite exactly to observe the ingress of the Sun into the first point of Aries, Cancer, Libra, and Capricorn, at the change or commencement of the four different quarters of the year; together with the conjunctions or oppositions of the luminaries next preceding the same ingresses. Then to the time of the ingress, erect the scheme of heaven, and observe, whether the places of the luminaries at the time of their conjunc-

tion or opposition, happen in a moist, dry, or cold mansion; and of what planets they are aspected, and likewise if the ruling planets be conjoined in such a mansion with the lord of the sign of that conjunction or opposition, and the lord of the ascendant; as also the *almuten*, or general lord of the figure, not neglecting the fixed stars of the first, second, and third magnitude, their rising, setting, and culminating with planets of the same nature, or having conveniency of aspect or radiation. Also, diligently consider the lord of the eclipse, or ruling planet of the great conjunction next preceding, if any do immediately precede, which being truly noted, observe carefully to what planet or fixed star he shall be corporally conjoined with, or apply to, next after the conjunction or opposition of the Sun and Moon; for according to the nature thereof, will the season generally be inclined. If Saturn therefore be well disposed in an angle, and in a moist asterism, without impediment, nor applying to another planet at the time of the Sun's ingress, it presages temperate and seasonable showers, and filleth the heaven with obscure clouds, especially in that lunation wherein he hath the chief dominion. But if, on the contrary, he be impeded, or evilly disposed, it portends turbulent storms of wind and rain, and cold, dense, and thick clouds, especially if Venus or Mercury be in moist signs, and behold him from an angle; for in that case there will be much rain. Jupiter in such a position, produceth winds and rain, with reddish clouds; Mars engenders yellow clouds, thunder, coruscations and rain, especially in those times and places proper and convenient, and the rather if Jupiter and Mercury give any testimony thereto. The Sun irradiated in that manner, produces red clouds, and a great deal of wet. The Moon applying to Venus, and assuming the above prerogatives, brings gentle rain; but if the Moon applies to Mercury, or if Mercury be lord and ruler of the figure with Jupiter, it portends showers and violent winds, and cloudy air; yet sometimes more violent, and sometimes more remiss, according to the signs, asterism, mansions of the Moon, and the conjunctions of the other stars, either fixed or erratic. And here note, that if the ruling planet be oriental, his effects will appear in the end, if occidental, in the beginning, whether it be in a revolution, solar ingress, or a lunation.

A scheme of the heavens, erected for the Sun's entrance into the first scruple of Aries, will, with the help of the Moon's principal aspects and configurations with the Sun and other planets at her several changes, determine the general state of the weather for that quarter. But in this species of prediction, we must never lose sight of the influence and attraction of the earth, nor of the force and peculiarity of each climate respectively, as heretofore laid down in our consideration of tides, winds, earth-

earthquakes, &c. because these peculiarities arise entirely from the particular situations of different climates or countries with respect to the Sun, and would have their weather fixed and certain, the same as their increase or decrease of day or night, were it not for the attractive and expulsive force of the other celestial bodies, which are incessantly varying that of the Sun, and of one another, according to their different positions and aspects. Hence it is necessary, before we attempt to give judgment of the weather in any particular country or climate, to be well informed of its particular situation with respect to land and sea, mountains and vallies, islands and continents, caverns and lakes, as well as of its geographical position, with respect to the tropics, equinoctial, ecliptic, &c. for as every different climate is differently affected by the Sun's influence upon it, as well as by the quality of its own proper soil or component parts, so will the action of the other celestial bodies thereupon be more powerful or remiss, as their nature and quality shall be found to agree with or oppose the state and temperature of those climates, and the Sun's influence at those times upon them. Hence we see clearly the extreme difficulty of calculating the weather for England, Ireland, or any of the Islands, which being surrounded by the sea, are subject to much greater variations of weather than any of the continents, or great oceans. The cause is apparent. In England, we find almost every slight configuration of the Sun and Moon, and the rising and setting of particular stars, will change the state of the atmosphere almost instantaneously; and from the proximity of the sea every way round us, and the consequent moist vapours incessantly drawn up into the air by the attraction of these bodies, we become subject to wet, cloudy, coruscuous weather, which extends not to any of the surrounding coasts, but is peculiar only to the island over which these vapours are engendered. And hence it is we so often see showers, which though accompanied with violent thunder, lightning, wind, and hail, are frequently not heard of at a few miles distance; and that when, in one county, there has been a drought, and the land and corn almost dried and parched up, in the next adjoining county they shall be visited with frequent showers, and the fruits of the earth be luxuriant and flourishing. This fact must be within every man's observation who resides in England, and the cause is entirely peculiar to the country. The moist vapours of the contiguous ocean are drawn up into the clouds one hour; and by the opposing influence of some planet or star then rising or culminating, are driven down the next; whence it is obvious, that all attempts to foretel such mutations and changes as these, are absurd and futile. The object of this part of Astrology means only to ascertain those great and powerful operations of the stars, which shall be felt generally throughout whole provinces; that having their cause in the principal

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conjunctions, oppositions, or quadratures of the superior bodies, will raise tempests over a whole continent; pervade the bowels of the earth in porous and subterraneous countries, and produce earthquakes; that shall clothe the whole face of nature with fleecy snow or hoary frost; or from humidity and heat, shall either parch the land, while its fainting inhabitants gasp for breath, or putrify its air with pestilential qualities, which sends them by thousands to the grave.

The next thing to be considered in relation to the weather, is the conjunctions and aspects of the planets. The conjunction of Saturn and Jupiter, which ought accurately to be observed, produces its effects in the mutation of the air many days before and after, in regard of the tardiness of their motions. This conjunction happening in hot and dry mansions, or with fixed stars of that nature, generally produces dryness; increaseth heat in summer, and mitigates the cold in winter, but in moist signs it portends rain and inundations. Yet this is diligently to be noted, that the effects produced by this conjunction will be of the nature of the ruling planet; for if Saturn claims principal dominion in the place of the conjunction, and is elevated above Jupiter in respect of latitude, it denotes many diseases, and much evil in general; but the contrary, if Jupiter prevails. So likewise these two ponderous planets being in opposition, quartile, trine, or sextile, is a sign of continuance of seasons; but for the most part they bring forth impetuous storms of rain and hail; particularly happening in the spring time in moist asterisms, they produce turbulent air; in summer, hail and thunder; in autumn, winds and wet; in winter, obscure and thick clouds, and dark air. Saturn and Mars in conjunction, quartile, or opposition, and Jupiter giving testimony, usually preface winds and rain, hail, thunder, lightnings, and corruscations, according to the seasons of the year; for in the spring it portends wind, rain and thunder; in summer hail and thunder; in autumn, violent rain; and in winter, diminution of cold; but above all, observe the ruling planet, and according to his nature judge. Saturn and the Sun in conjunction, quartile, or opposition, is *apertio portarum*, especially if it happens in a moist constellation; for then in the spring time, it threatens dark and heavy clouds; in summer, hail, thunder, and remission of heat; in autumn, rain and cold; in winter, frost, snow, and cloudy weather. Saturn and Venus in conjunction, quartile, or opposition, generally produceth cold rain, and showers; in spring, they bring forth rain, and cold; in summer, sudden and hasty showers; in autumn, cold rain (as in spring or winter, snow, or cold rain). Saturn and Mercury in conjunction, quartile, or opposition, in dry signs and mansions, bring forth dryness; in moist signs, rain; in the airy, winds; in the earthy, cold

cold air and dryness ; particularly in the spring, it produces wind, and rain ; in summer, wind, and showers ; in autumn, wind, and clouds ; and in winter, wind, and snow. Saturn and the Moon in conjunction, quartile, or opposition, affect the air according to that part of the asterism wherein they are conjoined or aspected. In the moist signs, it portends clouds, and coldness ; in the airy, and in Sagittarius and Capricorn, it increaseth cold, especially when the Moon is full of light, and when she is void of course, it brings forth dryness, but in dry signs it begetteth sharp air, and a frosty season, if it be in winter ; generally the Moon and Saturn stir up thick clouds, and gentle showers. In the spring it is a sign of a turbid and moist air ; in summer, moisture, with remission of heat, and sometimes hail, if there be any aspect of Mars or Mercury ; in autumn, it presages a cloudy air ; in winter, clouds, and snow, with vehement cold.

Jupiter and Mars in conjunction, quartile, or opposition, changeth the quality of the air, according to the nature of the signs and stars, to which they are conjoined, or otherwise aspected. In hot and dry mansions, it causeth great heat, in the moist signs, thunder and rain, but particularly in the spring time, it produceth winds, and turbulent air ; in summer, heat, and thunder and lightening ; in autumn, tempestuous and windy air ; and in winter, remission of cold, and temperature of air. But in this conjunction we must observe the ruling planet, for if Jupiter shall rule and be elevated above Mars, it signifies much good and felicity, plenty of fruit, and such things as serve for the sustenance of mankind, according to his benevolent nature ; but Mars ruling, produceth many diseases, dryness, house burnings, and the like. Also Jupiter and Mars with tempestuous stars, as Arcturus, the Eagle, tail of the Dolphin, light star of the Crown, &c. stirreth up wind and hail, and in summer also thunder ; in winter he inclineth the air to warmth, especially if Jupiter be then stationary. Jupiter and the Sun in conjunction, quartile, or opposition, bring forth wholesome winds, and serenity, particularly in spring and autumn they signify winds ; in summer thunder, and in winter remission of cold. Jupiter and Venus in conjunction, quartile, or opposition, doth generally produce serenity and temperature of air ; in the moist signs it promiseth gentle showers, in other signs fair weather, wholesome winds, and fertility of all things. Jupiter and Mercury in conjunction, quartile, or opposition, stirreth up the winds, and sometimes there is *apertio portarum* to winds and rain ; in the fiery signs it begetteth dryness and warm winds ; in the airy signs fair weather, but winds in all seasons of the year, particularly in the spring and autumn, it portends hail, and in winter snow. Jupiter and the Moon in conjunction, quartile, or opposition,

sition, produce gentlewinds, serenity, and temperature of the air, yet it altereth the weather, according to the quality of the sign and asterism, which they possess, but at all times it generally denotes a mild and temperate season.

Mars and the Sun in conjunction, quartile, or opposition, in the fiery signs, portend heat and dryness; in the watery, hail, thunder, and lightning; in the airy, clouds; and in the earthy, violent winds; in the spring and autumn, it exciteth dry winds; in summer, great heat, lightning, and thunder; and in winter, remission of cold. Mars and Venus in conjunction, quartile, or opposition, is *apertio portarum* to much rain if it happen in moist signs, especially in spring and autumn; in summer it engendereth showers; in winter, remission of cold, yet often times snow, when Saturn beholds them. Mars and Mercury in conjunction, quartile, or opposition, in winter and spring, foretels snow; in summer, thunder, and hail; in autumn, hail, and great winds, and in fiery and dry signs, it presageth warmth and excessive dryness. Mars and the Moon in conjunction, quartile, or opposition, in moist signs, demonstrates rain; in fiery, dryness, red clouds, and sometimes rain; in summer, lightning, hail, and coruscations. Mars entering new signs, very often changeth the air, so Mars passing by *Suculæ*, or *Hyades*, causeth clouds and moisture. Mars in Cancer, with north latitude, in autumn and winter, bringeth warm weather; with wind and rain, and sharp diseases, if Mars shall aspect Saturn, Venus, or Mercury. Mars passing by the Pleiades maketh a cloudy season, and being accompanied with stars of a tempestuous nature, as Arcturus, the Eagle, bright star of the Crown, Bull's eye, Tail of the Dolphin, Procyon, Fidicula, Scorpion's Heart, Virgin's Spike, &c. rising or setting with them, signifies a turbulent, windy, and oftentimes a sultry and unwholesome air.

The Sun and Venus in conjunction commonly produce moisture; in spring and autumn, rain; in summer, showers and thunder; in winter, rain. The Sun and Mercury in conjunction, in the airy signs produce winds, in the watery signs rain, in the fiery dryness and warm winds, (hurtful to mankind). The Sun and Moon in conjunction, quartile, or opposition, in moist signs, portends rain, in fiery signs, fair weather, but generally it alters the air according to the nature of the ruling planet and the nature of the season. The conjunction, semisextile, and sextile of Venus and Mercury, infer store of winds, and wet, and in winter, snow; provided they be almost equal in motion; Venus in the first decade of Cancer presageth rain: also her being with the *Pleiades*, *Hyades*, and the *Affelli*, prenotes a moist season.

In the revolution of the year, if Mars shall be in his own sign, it portends much rain; if he be in the house of Saturn, it shews but little; in others but a mediocrity. In the revolution of the year, when Venus, Mercury, and the Moon, are found in moist mansions, it portends much rain. At the ingress of the Sun in tropical signs, if Venus shall aspect the Moon from a moist place, it is a token of much rain, or if Mars from Scorpio shall aspect Venus, it portends likewise rain. When the Sun is in Aries or Taurus, if Venus be then retrograde, the spring will be moist. The Sun in the terms of Mars, increaseth the heat in summer, and dryness of the springs in winter. In the conjunction or opposition preceding the entrance of the Sun into Aries, and also in the ingress itself, if the Moon behold Saturn, and both be in moist signs, it is the presage of thick clouds, or soft and gentle showers continuing long; but if Venus or Mercury behold Saturn, then the rain will be more vehement, and of long continuance.

If in the autumnal quarter, more retrograde planets be with the Sun than in the other seasons, which in the winter following will become direct, it is a sign of great dryness. When the Sun enters the eighteenth degree of Scorpio, if Mercury be in a moist place it is a sign of rain, and observe also the planet that is then *Almuten* of the figure erected for that moment, and pronounce judgment according to his nature and position. Venus in winter, direct and oriental of the Sun, signifies but little rain in the beginning of winter, and more store towards the end. When Venus applies to Mars in Scorpio, it brings rain immediately. When the Sun, Moon, Venus, and Mercury are all conjoined together, it argues continual showers that day, if the Moon beholds them from some other place, or if she be in opposition to them. When at the time of the conjunction or opposition of the luminaries, Venus shall be in an angle, it is a certain sign of rain; the lord of the ascendant in a watery sign begetteth rain.

To determine judgment of the particular state of the air, we must consider these six things: first, at the time of the conjunction, quartile, or opposition of the luminaries, to observe the planet that is lord or *Almuten*; for according to his quality and nature will the season be inclined. Secondly, to consider the sign which the said lord possesseth, with his nature and quality. Thirdly, to observe the sign ascending, the nature, and of what mansion of the Moon it is in. Fourthly, the places of the planets, both in the zodiac, and the celestial houses, whether they be in angles, or else where. Fifthly, to observe next after the conjunction, opposition, or quartile, what planet the Moon is first conjoineth with in aspect.

aspect. And lastly, to consider to which of the planets, or fixed stars, the lord is first joined, or of whom he is beheld. These things being well considered, judgment follows; namely, if the lord of the conjunction, quartile, or opposition, be of a moist nature, and the planets in moist places, and the said lord also be joined to stars or planets of a moist nature; and the Moon after separation shall conjoin, or have aspect with a moist planet, the nature of the time will be wet and rainy; if all incline to dryness, it will be dry; if to warmth, pronounce hot weather; if to cold, cold weather. The nature of the time will then chiefly be moved, when the Moon, after conjunction, quartile, or opposition, shall be conjoined by body, or any strong aspect to the significator. And when the Moon comes to the sign ascending of the conjunction, quartile, or opposition, the time will be changed according to the quality and nature of the sign and asterism.

Daily experience shews, that the weather is much varied by the situation of the winds; for according to their different bearing is the season much inclined, sometimes to hail, rain, and snow, and again, to fair weather; wherefore I shall state those aspects which are found to attract, raise, vary, or alter the position of the winds, as they alternately rise or set in parallels to the different bearings of the earth. Besides these, there are the lateral and colateral winds, blowing between these points, which partake more or less of the quality of the foregoing, as they approach or recede from them. In the figure of the Sun's ingress into any of the cardinal signs, or conjunction or opposition of the luminaries preceding, or monthly lunation; observe carefully what planet is predominant in the figure, and their positions one to another mutually, as before stated, will give a near conjecture of the wind.

Saturn is the mover of the eastern winds, Jupiter of the northern, Mars of the west and south, Venus of the southern, and Mercury according as he shall be conjoined with others; the Sun and Moon of the western winds. The quality of the winds, and their bearing is also known from their positions in the figure; for the planets with latitude and south declination, from the mid-heaven, move the southern winds to blow. From the *inimæ cæli*, with latitude, and northern declination, the northern winds; the oriental planets move the eastern winds, but the occidental the western winds, and when they are weak, they attract or cause the intermediate winds to blow.

Also the situation and quality of the winds is gathered from the latitude of the Moon, as she inclines to the north or south; so the signs do
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also demonstrate the winds, for Aries, Leo, and Sagittary, excite the north-west winds; Taurus, Virgo, and Capricorn, the south-east; Gemini, Libra, and Aquaries, the north-east; Cancer, Scorpio, and Pisces, the south-west. Likewise from the application of Mercury to the other planets, we may in some measure prognosticate the quality of the winds, for if Mercury apply to Saturn, it produces great winds, clouds, and rain; if to Jupiter mild winds; if to Mars warm winds; if to Mars and the Sun, warm and hurtful winds; if to Venus cold winds.

Also the rising, culminating, and setting of the fixed stars, with the Sun, Moon, and other planets, alter the state of the winds in the following manner: *Regulus*, or the *Lion's Heart*, setting with the Sun excites the west winds to blow many days together. The rising of *Pleiades* with the Sun moveth the east wind. The setting of *Arcturus* stirreth up the southern winds. The setting of *Pleiades* with the Sun excites the north-east wind. The rising of the *Dolphin* with the Sun also produceth wind. The rising or setting of *Arcturus*, (the head of the former Twin) the southern belly of *Pisces*, the star of the *Triangle*, with the Sun, Saturn, Jupiter, Mars, or Mercury, begetteth winds. The setting of *Hyades*, troubleth both sea and land, especially when Mars and Mercury give testimony. If at the time of the matutine setting of the *Dolphin*, there be showers, there will be none at the rising of *Arcturus*. The rising of the *Haedi* produce rain. The matutine rising of the greater *Dog* begetteth heat, troubleth the seas, and changeth all things.

The great Ptolomy, from many years observation, deduced the following effects from the fixed stars rising with the Sun. *Orion's Girdle*, rising with the Sun, maketh a turbid air. The setting of the *Crown* presageth tempests. *Syrius* and *Aquilo* rising in the evening, produce tempests. The setting of *Regulus* causeth the north wind, and sometimes also rain. The setting of the *Dolphin* produces wind and snow. The setting of *Vindemiator* moveth the north-east wind. The rising of the *Ram's-Horn* brings forth rain and snow. The vespertine rising of *Arcturus* portends tempests. The rising of the *Pleiades* maketh the west wind to blow. The vespertine setting of *Syrius*, produceth the south, and north north-east winds. The matutine setting of the *Hyades*, presageth rain, and the south wind. The vespertine setting of the *Pleiades* moves the south wind, terminating in the west. The rising of the *Succulæ* brings rain. The rising of *Orion* maketh the west wind to blow. The matutine setting of *Arcturus* promiseth good weather. The matutine setting of the *Eagle*, causeth great heat, and the south wind. The matutine rising of *Regulus* moveth *Aquilo*. The matutine setting of

Arcturus presageth showers. The matutine setting of the *Succulæ* begetteth rain, snow, and winds.

The Sun rising with the *Affelli*, troubles the air with thunder, lightning, showers, and the like. The Sun rising with the *Eagle* produceth snow, as also with the tail of the *Goat* and head of *Medusa*. His rising with *Aldebaran* and the stars of *Orion*, moveth wind, rain, thunder and lightning. When he riseth with the cloudy stars in *Leo*, with *Orion*, with the tail of *Leo*, the light star of *Hydra*, the *Crown*, or the stars in the forehead of the *Scorpion*, it portends a cloudy season. The Sun setting with the *Harp* presageth a cold and moist time; with the *Pleiades* it begets wind and rain; with *Regulus* showers, thunder and lightning; with the *Greater Dog*, a fair warm time, with thunder and lightning; with *Orion* and *Aldebaran*, a turbid, windy, and wet air; with *Acornar* and the stars of *Jupiter*, a serene, and temperate season; with the stars of the nature of *Saturn*, he produceth cold rain, or snow; with the stars of *Venus*, rain and moisture; with the stars of *Mars*, thunder and lightning. *Saturn* with the *Head* of *Medusa*, begetteth cold and moisture; with the *Pleiades* he troubleth the air, and engenders clouds, rain and snow; with the stars of *Orion* he produceth wind and showers; with *Arcturus*, wind and rain; with the *Virgin's Spike*, showers and thunder; with the *Dolphin*, bright star of the *Crown*, *Goat's Tail*, or the *Harp*, it causeth a moist and cloudy time, sometimes snow and rain; with *Prespe*, and the *Hyades*, it begetteth winds, clouds, rain, and thunder; with the *Lion's Heart*, it produceth thunder and rain, and instability of weather; with the greater *Dog*, it signifies winds, rain, thunder, and lightning.

Jupiter rising with *Regulus*, brings fair weather in winter, and mitigates the cold, and increaseth the heat in summer; with the *Neck* of the *Lion* it raiseth the winds, and with *Acornar* it promiseth serenity. *Mars* rising with the *Goat's Tail* foretellet a moist time; with the stars in the *Scorpion's* forehead it denotes cold rain, or snow; with *Arcturus* vehement winds, rain, thunder and lightning; with the *Eagle* rain, snow, and great coldness; with the stars of *Orion*, *Hyades*, *Regulus*, and the *Dogs*, it signifies great heat. *Mercury* with the *Pleiades* begetteth winds and rain; with the *Eagle* snow, or rain; with the stars of *Orion*, *Hyades*, *Regulus*, and the *Dogs*, it produceth winds, showers, thunder and lightning; with the *Goat's Tail*, cold winds, snow, or showers; with the back and neck of the *Lion*, moistness with winds; with the *Lion's Tail*, *Spica Virgo*, the *Harp*, &c. it portends a sudden change to wind and rain.

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The rising and setting of these stars and constellations might be known, and their effects in some degree pre-determined, by the sudden alterations and changes we perceive in the atmosphere; from which, by diligent observation, and repeated experience, we may derive pretty accurate rules how to judge of the weather, so as to regulate our conduct in the prosecution of journeys, or the management of business, particularly such as relates to gardening and husbandry.

The air, in which we breathe, being commixt with inflammable vapours, at which time it is hotter than ordinary, and unapt for respiration, shews the approach of thunder and lightning.—When the ringing of bells, or other sounds are heard loud and faint, with discordant particles, and by intervals, it shews the air to be dilated and disturbed, prefigures either wind or rain, and sometimes both.—A sharp and cold wind after rain, foreshews more to come; the exhalation or vapour not being spent in the former shower.—Winds that continue long in any one of the cardinal points, will cause the weather to continue the same, whether it be fair or foul; but if it shifts often in changing its place, it presageth rain quickly after to ensue; but in times of frost, it is a sign that the weather is about to break.—Whirlwinds predict approaching storms of rain and hail; these winds are known by raising the dust or any light materials, and they are oftentimes forerunners of great tempests, for it is a windy exhalation driven obliquely upon the horizontal plane, and forced down by the coldness or moisture of the lower region; this repercussion of the air, causeth chimneys to smoke which do not at other times, and foreshews great winds.—Sometimes whirlwinds are caused by the meeting of one another, and so raising light particles of matter, as it were in contention with each other, hurls them to and fro at the pleasure of the prevailing power; and such as these usually presage tempests, and may be known by the clouds moving several ways at once, from the same cause above as below.—When the air is dilated or rarified, it is a sign of much heat, or else produces rain, which might be known by the stench of shores, foul places, or things corrupted, which are more offensive than at other times.—When the clouds be dark, deep, and lowering, it is a sign of rain, and sometimes of tempestuous weather, or of violent storms of thunder and lightning.—If there be more thunder than lightning, it argues a stress of wind from that part whence it thundered, and also of rain.—When it lightens and no clap of thunder succeeds, it is a sign in summer of much heat, and sometimes of rain.—When it lightens only from the north-west, it betokens rain the next day.—Lightning from the north presages winds, and oftentimes great tempests.—If from the south or west it lightens, expect both wind and rain from those parts.
—Morn-

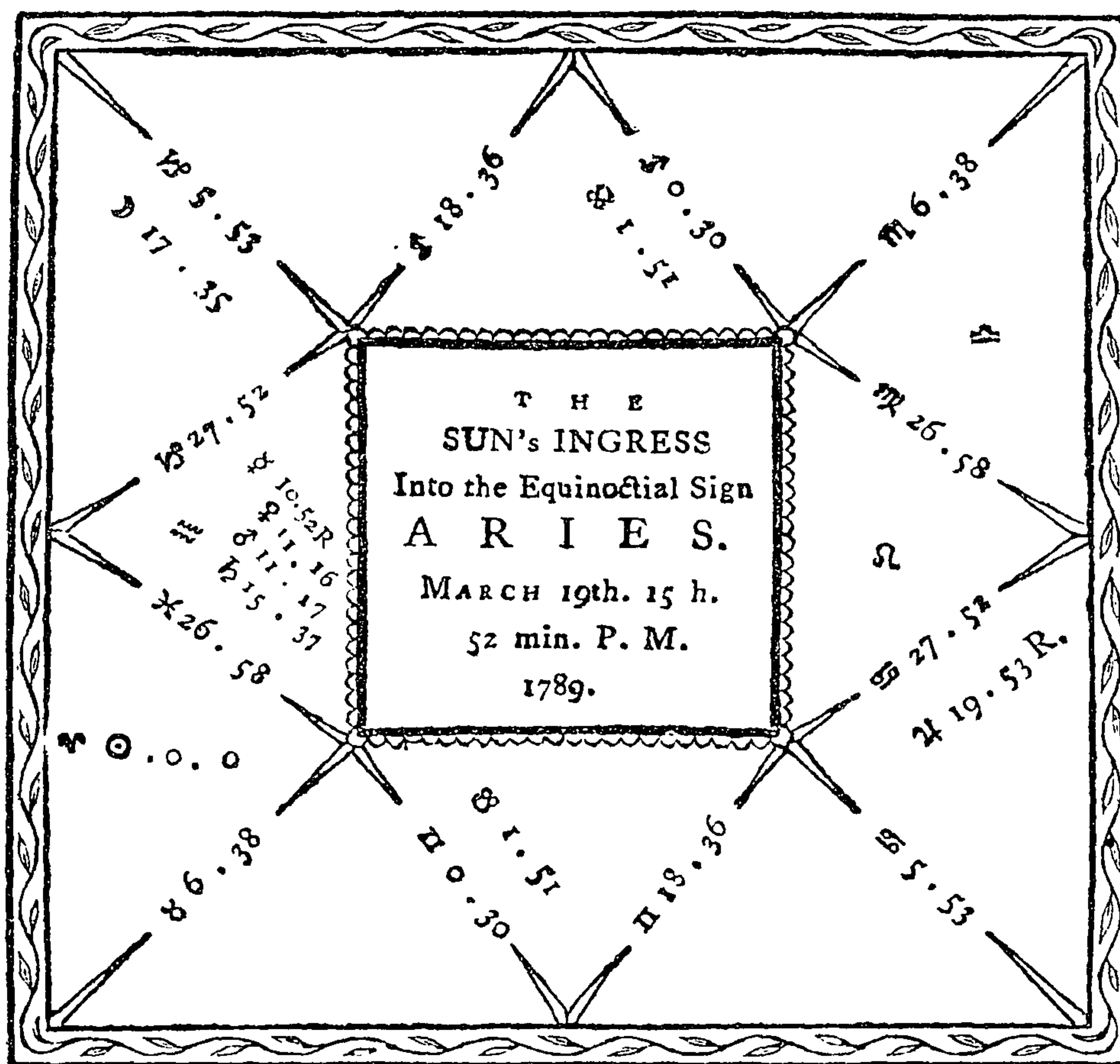
—Morning thunder produces winds ; but mid-day, or in the evening, storms of rain and wind.—If the lightning appears very pale, it argues the air to be full of electric fluid ; if red or fiery, it foreshews winds and tempests.—When the flashes of lightning continue long before they vanish, they denote the storm to be general throughout a whole province.—Thunder and lightning in winter in hot climates is usual, and hath the same effects ; but in these northern climates it is held ominous, and seldom occurs without being the forerunners of much mischief.—Many scattering clouds wandering in the air, and moving swiftly, argue wind or rain ; if from the north or south, it denotes an approaching storm ; but if the rack rides both ways, it foreshews a tempest.—If the rack in the forenoon rides in the air, from the eastward, it argues rain at night ; but if from the west, it foreshews a cloudy morning, and rain ; and at any time of the day when the Sun beams and wind meet, it may cause the same effect by virtue of his rays.—When the clouds seem piled upon heaps like fleeces of wool, it presages wet weather to be near at hand.—If the clouds fly low in summer, it is a sign of rain ; and in winter it foreshews snow and cold weather will ensue.—When the clouds seem white and jagged, as if rent asunder, gathering together in a body, their forces uniting, they foretel a storm ; the nature of the exhalation is apparently turbulent by the form and colour.—Hollow and murmuring winds presage stormy weather, for it shews the air to be moist and dilated, and cannot find passage, but is opposed or hindered in its motion, by hills, trees, and hollow places, which it gets into, and then evacuates with a roaring noise.—The air being a subtile body, infuses itself into the pores of timber, boards, &c. and denotes rain, by being converted into drops of water, or a moisture on the surface, which makes doors and boards swell, wainscots crack, &c. for some time before the rain comes on.—Paper against wet weather will grow weak, damp, and swell, the reason is the same with the last ; but in writing paper it will soonest be perceived, and more certainly predict the weather, because it is sized with a thin substance of a gummy nature, which with the wateriness of the air dissolves and grows moist, giving way for the ink to soak into the paper, which the size in dry weather will not permit.—When the clouds seem overcharged, and collect in white spirals or towers, expect then rain, hail, or snow, according to the season of the year.—After a storm of hail, expect frost to follow the next day.—Mists descending from the tops of hills, and settling in the valleys, is a sign of a fair day, especially in summer time, and is then an argument of heat ; for they are exhalations raised by the fervor of the Sun, which by the air in the evening are converted into mists and dews, as a necessary provision for nature to cool the earth, and refresh her fruits, whereby to enable them that they
may

may endure the next day's heat. White mists are the same, but more waterish, and inclining to rain; and if they ascend it presageth rain, and argues that the middle region of the air is temperate, the lowest waterish, and the vapours warm.—If in calm and serene weather the rack be observed to ride apace, expect winds from that quarter; for it is evident that the exhalations in the clouds are converted into wind or rain, and will descend; but if the clouds ascend, it shews the storm is past, and has happened at some little distance.—A thick or dark sky, lasting for sometime in a morning, without either Sun or rain, becomes fair towards the middle of the day, but soon after turns to wet rainy weather.—A change in the *warmth* of the weather, is generally followed by a change in the wind. Hence it is common to see a warm southerly wind suddenly changed to the north by the fall of snow or hail; or to see the wind in a cold frosty morning, after the Sun has well warmed the earth and air, wheel from the north towards the south; and again to the north or east, in the cold evening.

Most *vegetables* expand their down and flowers in fair Sun-shiny weather; but close them previous to cold weather or rain. This is remarkably visible in the down of dandelion, and eminently distinguished in the flowers of pimpernel*; the opening and shutting of which, serve as the husbandman's weather glass, whereby he foretels the weather of the ensuing day with astonishing exactness. The rule is, if the blossoms are close shut up, it betokens rain and foul weather; if they be expanded and spread abroad, the weather will be settled and serene. The stalks of trefoil swell against rain, and become more upright and erect; and the same may be observed, though not so sensibly, in the stalks of almost every other plant.

Now, by way of example to the reader, I shall here give the figure of the Sun's ingress into the equinoctial sign Aries, which commences the vernal, or spring quarter, in the ensuing year 1789, together with the aspects which the Sun, Moon, and planets will make throughout that quarter; which will be sufficient to enable any attentive reader to perform this part of the science with satisfaction and pleasure, for any length of time to come.

* See these curious properties, amongst a thousand others peculiar to the herbary creation, more particularly described in my Notes and Illustrations to the improved edition of Culpeper's English Phylician and Complete Herbal, now publishing in 4to. with upwards of four hundred engravings of the different British plants, coloured to nature.



Such will be the position of the heavens at the time of the Sun's entrance into the first point of Aries, being the commencement of the spring or vernal quarter of 1789, which will happen that year on the 19th of March, at 15h. 52m. or according to civil time, at fifty-two minutes past three o'clock in the morning of the 20th day, for which the above scheme is accurately calculated.

In drawing judgment of the state and temperature of the weather from this figure, we must not only consider the aspects and configurations of the luminaries and planets, but note the quality of the signs and triplicities wherein they are posited, and what will be the chief or predominant influence of the superiors. After which, the aspects must be regularly set down in succession till the commencement of the next ensuing quarter, when a figure of that ingress must also be calculated, and considered in the same manner as the preceding, together with the place of the Sun, and quality of the season; by which means we shall find the weather

At the commencement of the spring quarter, we find the cold ponderous planet Saturn will have just before departed from an almost absolute rule and government in the watery sign Pisces, and in no aspect either with Jupiter or the Sun. This is a demonstrable proof that the preceding quarter will be intensely cold; and since Saturn is of a hardening astringent nature, the waters will be congealed, and a cold durable frost will evidently distinguish the commencement of the year 1789. But the case will be materially different towards the approach of the vernal equinox, when the Sun enters into the sign Aries; at which time the cold influence of Saturn will be mitigated by a trine aspect of Jupiter, and by the encreasing strength of the beams of Sol. Nevertheless, since there are five planets configured in watery signs, and the influx of Saturn not entirely abated, and also, since we find the preceding provincial Full Moon will be made in a watery sign, it may safely be concluded that the spring quarter will for the first part be cold and wet; the wind leaning mostly to the north and east, will occasion fleet, and snow or hail intermingled with rain; towards the middle, there will be westerly gales of wind, and storms of rain and hail; but moderate towards the end, with the wind mostly down to the southern point of the compass. The following aspects, particularly of the Sun and Moon, will shew the precise variations and general inclinations of the weather on each of those days.

The Moon's last aspect, previous to the following, was comixt with Saturn, a cold astringent planet, in a watery sign.

17,	☐	♂	♂	Moon	in	♄	Saturn	in	♄
18,	☐	☉	♂	Sun	in	♄	Moon	in	♄
19,	♂	♂	♀	Mars	in	♄	Venus	in	♄
	♂	♂	♀	Mars	in	♄	Mercury	in	♄
	♂	♀	♀	Venus	in	♄	Mercury	in	♄
	*	♂	♀	Moon	in	♄	Venus	in	♄
	*	♂	♂	Moon	in	♄	Mars	in	♄
	*	♂	♀	Moon	in	♄	Mercury	in	♄
20,	♂	♂	♂	Moon	in	♄	Jupiter	in	♄
21,	*	☉	♂	Moon	in	♄	Sun	in	♄

These quartiles will produce cold and moist weather, snow, sleet, and rain.

Mars having so great rule in these conjunctions, which though made in a watery sign, yet he will abate the watery element, and make the day particularly fine, but cold.

23, 8 Sta-

April		ASPECTS.				WEATHER.		
11,	△ D h	Moon	in m	Saturn	in x	} <i>Fine pleasant days, but cold nights.</i>		
12,	△ D 4	Moon	in m	Jupiter	in ☿			
	△ D ♀	Moon	in m	Mercury	in x			
	△ D ♂	Moon	in m	Mars	in x			
			in Perigee					
13,	△ D ♀	Moon	in ♄	Venus	in ♀	} <i>Fine day.</i>		
14,	△ ○ D	Moon	in ♄	Sun	in ♀			
	□ D h	Moon	in ♄	Saturn	in x	} <i>Warm breezes.</i>		
15,	□ D ♂	Moon	in ♄	Mars	in x			
	□ D ♀	Moon	in ♄	Mercury	in x	} <i>Pleasant weather.</i>		
16,	* D h	Moon	in ♄	Saturn	in x			
	♂ D 4	Moon	in ♄	Jupiter	in ☿	} <i>Some dark clouds, but no rain.</i>		
	□ D ♀	Moon	in ♄	Venus	in ♀			
17,	□ ○ D	Sun	in ♀	Moon	in ♄	} <i>Fine clear settled weather.</i>		
	♂ ♂ ♀	Mars	in x	Mercury	in x			
	* D ♂	Moon	in ♄	Mars	in x			
	* D ♀	Moon	in ♄	Mercury	in x			
18,	* D ♀	Moon	in ☿	Venus	in ♀	<i>Clear sky, with serene air.</i>		
19,	* ○ D	Sun	in ♀	Moon	in ☿	<i>Mild seasonable weather.</i>		
21,	♂ D h	Moon	in x	Saturn	in x	} <i>Fine warm day.</i>		
	△ D 4	Moon	in x	Jupiter	in ☿			
	□ 4 ♀	Jupiter	in ☿	Venus	in ♀			
23,	♂ D ♂	Moon	in ♀	Mars	in ♀	} <i>Some wind and rain.</i>		
	♂ D ♀	Moon	in ♀	Mercury	in ♀			
24,	♂ D ♀	Moon	in ♀	Venus	in ♀	} <i>Gentle showers.</i>		
	□ D 4	Moon	in ♀	Jupiter	in ☿			
25,	♂ ○ D	Sun	in ♂	Moon	in ♂	} <i>Dark clouds, with storms of rain and hail.</i>		
26,	* D h	Moon	in ♂	Saturn	in x			
			in apogee					
	* D 4	Moon	in ♂	Jupiter	in ☿	} <i>Dull morning, but pleasant afternoon.</i>		
28,	□ D h	Moon	in ♄	Saturn	in x			
	* D ♂	Moon	in ♄	Mars	in ♀	} <i>Pleasant day.</i>		
	* D ♀	Moon	in ♄	Mercury	in ♀			
29,	□ 4 ♀	Jupiter	in ☿	Mercury	in ♀	} <i>Open fine air.</i>		
30,	* ○ D	Sun	in ♂	Moon	in ☿			
	* D ♀	Moon	in ☿	Venus	in ♂			
May								
1,	△ D h	Moon	in ☿	Saturn	in x	} <i>Cloudy, with showers of rain.</i>		
	♂ D 4	D and 4			in ☿			
	□ D ♀	Moon	in ☿	Mercury	in ♀			

May	ASPECTS.				WEATHER.	
2,	☿	☾	☼	Sun in ♈ Moon in ♈	} Warm pleasant weather.	
	☿	☾	♂	Moon in ♈ Mars in ♈		
	☿	☾	♀	Moon in ♈ Venus in ♈		
4,	☿	☾	☼	Sun in ♈ Moon in ♈	} Some showers of rain.	
	☿	☾	♀	Moon in ♈ Venus in ♈		
	☿	☾	♂	Moon in ♈ Mercury in ♈		
5,	♂	☾	♂	Moon in ♈ Saturn in ♈	} Fine pleasant weather.	
	*	☾	♂	Moon in ♈ Jupiter in ♈		
7,	☿	☾	♂	Moon in ♈ Jupiter in ♈		
	♂	☾	♂	Moon in ♈ Mars in ♈	} Many showers.	
8,	♂	☾	♂	Moon in ♈ Mercury in ♈		
	♂	☾	♀	Moon in ♈ Venus in ♈		
9,	♂	☾	☼	Moon in ♈ Sun in ♈	} Dark clouds, with wind and rain.	
				in perigee		
	☿	☾	♂	Moon in ♈ Saturn in ♈		
	☿	☾	♂	Moon in ♈ Jupiter in ♈	} Dull day.	
	♂	♀	♀	Venus in ♈ Mercury in ♈		
10,	*	☼	♂	Sun in ♈ Saturn in ♈		
11,	☿	☾	♂	Moon in ♈ Saturn in ♈	} Condensed air.	
13,	☿	☾	♀	Moon in ♈ Venus in ♈		
	☿	☾	♂	Moon in ♈ Mercury in ♈		
14,	☿	☼	☼	Sun in ♈ Moon in ♈	} Close condensed air, with thunder and lightning.	
	*	☾	♂	Moon in ♈ Saturn in ♈		
	♂	☾	♂	Moon in ♈ Jupiter in ♈		
	*	☾	♂	Moon in ♈ Mars in ♈	} Cloudy, with high winds and heavy showers for some days.	
16,	☿	♂	♂	Jupiter in ♈ Mars in ♈		
	*	♂	♂	Jupiter in ♈ Mercury in ♈		
	*	☼	♂	Sun in ♈ Jupiter in ♈		
	*	♂	♂	Saturn in ♈ Venus in ♈		
	♂	☼	♂	Sun and ♈		
19,	♂	☾	♂	Moon in ♈ Saturn in ♈	} Fair and pleasant weather.	
	☿	☾	♂	Moon in ♈ Jupiter in ♈		
	*	☾	♀	Moon in ♈ Venus in ♈		
	*	☼	☼	Sun in ♈ Moon in ♈	} Turbulent winds.	
20,	*	☾	♂	Moon in ♈ Mercury in ♈		
22,	♂	☾	♂	Moon in ♈ Mars in ♈	} Close heavy day, with much rain.	
	☿	☾	♂	Moon in ♈ Jupiter in ♈		
24,	*	☾	♂	Moon in ♈ Saturn in ♈	} Fine seasonable weather.	
	*	☾	♂	Moon in ♈ Jupiter in ♈		
25,	♂	☾	♂	Moon and ♈		
	♂	☾	♀	Moon and ♈		
	♂	☼	☼	Sun and Moon both in ♈		

O F A S T R O L O G Y

1841

		ASPECTS.				WEATHER	
May							
26,	□ D ♀	Moon	in ♀	Saturn	in ♀	}	<i>Warm cloudy weather with drizzling rain.</i>
27,	* D ♀	Moon	in ♀	Mars	in ♀		
28,	△ D ♀	Moon	in ☿	Saturn	in ♀		
	♂ D ♀	Moon	in ☿	Jupiter	in ☿		
29,	* ☉ D	Sun	in ♀	Moon	in ♀	}	<i>Warm weather, but un- settled, and perhaps thun- der.</i>
	□ D ♂	Moon	in ♀	Mars	in ♂		
	* D ♀	Moon	in ♀	Venus	in ♀		
30,	* D ♀	Moon	in ♀	Mercury	in ♀	}	<i>Cloudy, with rain and wind.</i>
31,	♂ ☉ ♀	Sun	in ♀	Venus	in ♀		
	△ D ♂	Moon	in ♀	Mars	in ♀		
	□ D ♀	Moon	in ♀	Venus	in ♀		
	□ ☉ D	Sun	in ♀	Moon	in ♀		
June							
1,	♂ D ♀	Moon	in ♀	Saturn	in ♀	}	<i>Unsettled weather, but mild and pleasant.</i>
	* ♀ ♀	Moon	in ♀	Jupiter	in ♀		
	□ D ♀	Moon	in ♀	Mercury	in ♀		
2,	△ ☉ D	Sun	in ♀	Moon	in ♀	}	<i>A fine clear day.</i>
	△ D ♀	Moon	in ♀	Venus	in ♀		
3,	□ D ♀	Moon	in ♀	Jupiter	in ☿	}	<i>Some thunder, with storms of rain.</i>
4,	♂ D ♂	Moon	in ♀	Mars	in ♂		
	△ ♀ ♀	Moon	in ♀	Mercury	in ☿	}	<i>Dark clouds with rain.</i>
5,	D	in perigee					
	△ D ♀	Moon	in ♀	Saturn	in ♀	}	<i>Gentle showers.</i>
6,	△ D ♀	Moon	in ♀	Jupiter	in ☿		
7,	♂ ☉ D	Sun	in ♀	Moon	in ♀	}	<i>Pleasant weather.</i>
	♂ D ♀	Moon	in ♀	Venus	in ♀		
8,	□ D ♀	Moon	in ♀	Saturn	in ♀	}	<i>Fine pleasant day.</i>
9,	△ D ♂	Moon	in ♀	Mars	in ♀		
	♂ D ♀	Moon	in ♀	Mercury	in ☿	}	<i>Warm day.</i>
10,	* D ♀	Moon	in ♀	Saturn	in ♀		
	♂ D ♀	Moon	in ♀	Jupiter	in ☿		
	□ ♀ ♀	Saturn	in ♀	Mercury	in ☿	}	<i>Gentle breezes with some clouds.</i>
11,	* ♂ ♀	Mars	in ♀	Mercury	in ☿		
12,	△ ☉ D	Sun	in ♀	Moon	in ♀	}	<i>Very pleasant weather.</i>
	□ D ♂	Moon	in ♀	Mars	in ♂		
	△ D ♀	Moon	in ♀	Venus	in ♀		
13,	□ ☉ ♀	Sun	in ♀	Saturn	in ♀	}	<i>Cloudy, and inclined to rain.</i>
14,	* D ♂	Moon	in ♀	Mars	in ♂		
	△ D ♀	Moon	in ♀	Mercury	in ☿		

May

June.	ASPECTS.						WEATHER.	
15,	☐	☉	☾	Sun	in ♈	Moon	in ♋	Fair and pleasant.
	♂	☾	♂	Moon	in ♋	Saturn	in ♋	
	△	☾	♂	Moon	in ♋	Jupiter	in ♎	
17,	☐	☾	♀	Moon	in ♍	Mercury	in ♎	Fine clear day.
18,	△	♂	♀	Saturn	in ♋	Mercury	in ♎	Wind and rain.
	*	☉	☾	Sun	in ♈	Moon	in ♍	
	☐	♂	☾	Moon	in ♍	Jupiter	in ♎	
	*	☾	♀	Moon	in ♍	Venus	in ♈	
20,	♂	☾	♂	Moon	in ♌	Mars	in ♌	Some dark clouds, with storms of thunder and lightning.
				in apogee				
	*	☾	♂	Moon	in ♌	Saturn	in ♋	
	*	☾	♂	Moon	in ♌	Jupiter	in ♎	
	*	☾	♀	Moon	in ♌	Mercury	in ♎	
22,	*	♂	♂	Saturn	in ♋	Mars	in ♌	Some gentle breezes, with showers of rain
	☐	☾	♂	Moon	in ♈	Saturn	in ♋	
23,	♂	☉	☾	Sun	in ♈	Moon	in ♋	Windy and wet.
	♂	♀	♀	Venus	in ♎	Mercury	in ♎	
24,	△	☾	♂	Moon	in ♎	Saturn	in ♋	Some gentle showers.
	*	☾	♂	Moon	in ♎	Mars	in ♌	
25,	♂	☾	♂	Moon	in ♎	Jupiter	in ♎	Thunder and rain.
	♂	☾	♀	Moon	in ♎	Mercury	in ♎	
26,	☐	☾	♂	Moon	in ♏	Mars	in ♌	Stormy and unsettled.
27,	*	☉	☾	Sun	in ♈	Moon	in ♏	
	*	☾	♀	Moon	in ♏	Venus	in ♈	
28,	♂	☾	♂	Moon	in ♎	Saturn	in ♋	Wind and rain.
	△	☾	♂	Moon	in ♎	Mars	in ♌	
	*	☾	♀	Moon	in ♎	Mercury	in ♎	
29,		☉		in aphelio				Frequent showers.
	☐	☉	☾	Sun	in ♎	Moon	in ♈	
	*	☾	♂	Moon	in ♎	Jupiter	in ♎	
30,	☐	☾	♀	Moon	in ♈	Venus	in ♎	Cloudy, with continuance of wet and moist weather.
	*	♂	♀	Mars	in ♌	Mercury	in ♎	
				in aphelio				

By continuing these aspects, the disposition of the weather will be found throughout the year, paying due attention to the place and power of the Sun, and the aspects of the Moon, which are the principal regulators of the weather; the Sun for dry, settled, and serene; and the Moon for moist, wet and showery, according to the nature of the signs and mansions wherein she hath her changes. And as the aspects of the luminaries are on this account the most essential to be known, I shall here insert the following short but infallible rule how to find them for ever.

Having

Having the time given of the *first* New Moon in January, all other Aspects of the Sun and Moon may be collected throughout the year, by adding to

			D.	h.	min.	sec.
Jan. 1. the Moon being New	r Full, her Age		00	00	00	00
For the Sextile Aspect take	—	—	4	22	7	20
For the first Quartile	—	—	7	9	11	1
For the Trine Aspect	—	—	9	20	14	41
Full Moon or Opposition	—	—	14	18	22	2
Full Moon's last Triangle	—	—	19	18	22	2
Second Quartile	—	—	22	3	33	2
Second Sextile Aspect	—	—	24	14	26	42
For the next New or Full Moon	—		29	12	44	3

By these additions, all the aspects the Sun and Moon make with each other, may be found at any time, or for any number of years; and cannot fail to be extremely useful in all calculations of the weather; in doing which, let particular attention be paid to the qualities and affections of the signs wherein these aspects are made, and judge of them according to the following rules, which, from observation and experience are found pretty correct.

The sign Aries always inclines to thunder and hail, because of its equinoxial presence; but the divisions thereof cause something more or less, according to the nature of the fixed stars that are in Aries; for its fore parts move showers and winds; the middle parts are temperate; the latter parts are hot and pestilential. Moreover, the northern parts are hot and corruptive; the southern, freezing and cold. Taurus participates of both tempers, and is somewhat warm: the fore parts and chiefly about the Pliades, produce earthquakes, clouds and winds; the middle parts moister and cooler; the latter parts and about the Hyades are fiery, and cause lightning and thunder. Further, its northern parts are temperate; the southern, disorderly and moveable. Gemini is generally temperate: the first parts moist and hurtful, the middle parts temperate, the latter parts are mixed and disorderly. Moreover the northern parts create earthquakes and wind; the southern are dry and burning. Cancer is gentle and warm: the first parts and about the Præsepe are suffocating; the middle parts temperate; the last parts windy: the northern and southern parts are each of them fiery and burning. Leo is wholly burning, suffocating, and pestilential: the middle parts temperate, the last parts moist and hurtful: the northern parts are moveable and burning, the south parts moist. Virgo is moist and causeth thunder: the first

parts are more hot and hurtful, the middle parts temperate, the last parts watery. Moreover, the north parts move winds, but the south are temperate. Libra is generally variable and mutable : the fore and middle parts are temperate, the latter parts are watery : the north parts are windy, and south parts moist and plentiful. Scorpio causeth thunder and is fiery : the fore parts produce snow : the middle parts are temperate, and the last parts cause earthquakes : its north parts are hot, the south parts moist. Sagittary produces winds : the fore parts are moist, the middle temperate, the last parts cause earthquakes. The north parts are windy, the south parts cause variety and moisture. Capricorn is wholly moist : the fore parts are burning and hurtful, the middle temperate, and the last stir up showers : the north and south parts are moist and hurtful. Aquaries is cold and watery : the first parts are moist, the middle temperate, and the last windy : the north parts are heating, and the south cause snow. Pisces is moist and a causer of winds : the fore parts are temperate, the middle moist, the last parts burning : the north parts stir up wind, and the south parts are watery.

Of the REVOLUTIONS of KINGDOMS and STATES.

The significators which take precedence in this department of the occult science, and the governing aspects, having already been amply explained, it will in this place be only necessary to lay down the general ground of its theory, and to offer some recent examples in justification of its practice, and in proof of its utility.

After the impressivè influx of the planetary configurations, the universal and particular effects of comets, eclipses, and great conjunctions, are next to be considered in this speculation. Comets, indeed, rarely appear ; but whenever they do, some great and signal event has always been remarked to follow, and of the nature and quality of those signs and mansions of the heavens where they form perfect aspects with the earth ; but which is most sensibly felt in those countries or states to which the nucleus or tail of the comet is at those times apparently directed. There the particular effect becomes universal, and overspreads that whole region with desolation, disorder, or famine, according to the state and quality of the comet, and its position with regard to the Sun. The manifestation of its effect will be in proportion to its proximity to the earth ; and the revolution or event will immediately follow. Hence we have seen recorded the unhappy desolation of whole provinces, either deluged by inundations of water, engendered and sent forth from the
nucleus

nucleus of the comet; or burnt up by its intemperate heat, in its recess from its perihelion, whereby the ambient becomes unapt for respiration, radical moisture is dried up, and all nature, as it were, sickens under it. Hence the depopulation of states, the extirpation of whole families, of discontents and insurrections amongst the people, and finally a change in the politics and government of the country.

The influence of Eclipses upon mundane affairs, hath been much questioned by some modern authors of no small weight in the literary scale; but I beg leave to remark, that the most perfect of human beings are at best but imperfect, and consequently subject to be swayed by prejudice, and to adopt false notions of whatever doctrines they oppose. That such is the case with those authors who deny the force of eclipses, requires nothing more than unprejudiced enquiry, and experimental observation to prove. The precision with which they are foretold, and the familiarity of their phenomenæ, seems to lessen their importance, and to take off from their external awfulness and grandeur; but their effect upon the ambient, and consequently upon the affairs of the world, will be ever found to remain the same.

The effects of eclipses arise not merely from the obscuration of light, but from their position, the quality of the signs wherein they fall, and of the significators with which they are conjoined. Hence their consideration is diverse; of which one is *local*, and by it we know over what countries eclipses will happen, and the stations of the impulsive planets acting with them, which will be either Saturn, Jupiter, or Mars, when stationary; for then they are significative. Another consideration is *temporal*, by which we know the time when the event presaged will happen, and how long its effect will continue. Another is *general*, as in what kind or quality the event will be comprehended. And lastly, *special*, by which is foreknown what the event will be that shall happen. To digest these several speculations, we must carefully consider the ecliptical place of the zodiac, and the countries or states, which according to that place, have familiarity with the Trigon; for those will unquestionably be most sensibly affected.

Those cities and countries which sympathize with the sign of the eclipse, either because the same horoscope corresponds to the time of their building and incorporating, or the irradiation of the luminaries in both cases to the same place; or the Midheaven comes by direction to the same point of the geniture of the king, prince, or governor; then, whatever city or country be found in these familiarities, they will be first
seized

seized by the accident ; and with greater or less violence, in proportion to the *quantity* of digits eclipsed over each place respectively. For eclipses have no influence where they are invisible ; and act with the greatest force where they are central and total ; and therefore subterranean eclipses have no effect or influence whatever, notwithstanding what hath been written to the contrary by common astrologers, almanack makers, and the like.

The second consideration is temporal, by which we know the time when the events shall happen, and how long they will continue. This we survey after the following manner. In eclipses which are made at the same time, seeing they do not fall every where alike, nor sustain universally the same degrees of obscuration ; nor continue alike in point of time at any two given places, it is necessary to erect a figure under the elevation of the pole of that particular place, for which its effect is to be calculated. By means of this, we exactly see the beginning, middle, and end of the eclipse, and the content of its duration ; by which the time is known when the portended event will begin to happen. If the eclipse be of the Sun, so many years are allowed for the event, as the obscuration measured hours ; but if an eclipse of the Moon, instead of years, so many months are to be accounted ; because of her proximity to the earth, and quicker influence. The beginning of the event, and the general intention is known, from the situation of the eclipse with respect to the ecliptical line, and the angles of the figure. If the middle time of a solar eclipse falls in or near the ascending horizon, its effect will begin to appear in that country over which it is elevated, in the first four months after its appearance ; but its greatest effect will happen in the first third part of that given time. Should the middle time of the Sun's eclipse fall in or near the midheaven, the event will not begin till the second four months ; and the intention or grand effect will not take place till the second third part of the time given. And so likewise, if the middle of the eclipse happens in or near the western horizon, the effect will take place in the third four months after, and its intention or greater force in the last third part thereof. But in eclipses of the moon, the time is equated differently ; for if they happen in or near the eastern horizon, their effect will fall upon the place over which they are elevated, almost immediately ; and if in or near the meridian, within a week or ten days ; or if in or near the western horizon, then their influence will be felt within a fortnight or twenty days after ; and the general intention or most visible influence will in each case almost instantaneously succeed.

From these considerations it will by consequence follow, that the nearer any planet or star, aspect or familiarity, congress or conjunction, happens

happens to the ecliptic line, the more forcibly will this influence and effect be found to operate. So likewise the planets or stars concerned in the influence of eclipses or other configurations, happening in an oriental quarter, bring a more immediate appearance of its effect; while an occidental position retards and keeps it off. After the same manner, by observing the ecliptical new and full Moons, and their quartile aspects, and how they unite with or behold the principal place or medium of the eclipse, the particular times in which the effects of eclipses will increase or diminish, are sought out and discovered. According to which we find, that when stars emerge, or are relieved from the obscuration of the Sun beams, and increase in light and motion, their influence and power increases; but when a planet is stationary, and slow of motion, they cause the greater intention of the accident. And hence it is that Saturn and Jupiter, being slower of motion than the rest of the planets, have much more influence and power upon the particles floating in the ambient, and consequently upon the minds and passions of men.

The third consideration is to define, what kind or species will suffer under the effects; and this is judged from the form of the signs and their property; and from the quality of the stars both fixed and wandering, that are posited in the sign where the eclipse happens, or in the angle preceding. The Almuten, or lord of the eclipse, is thus to be considered, and may be thus taken; of the wandering stars, which ever hath most affinity to the place of the eclipse and angles of the figure, and applies or recedes, according to vicinity and appearance; hath more respect to those that have familiarity of aspect, and is either lord of the houses, trigons, exaltations, or terms; such alone is to be constituted lord of the eclipse. But if several planets are found nearly equal and alike in power, we elect him to the dominion which is most angular, or that hath greater familiarity of action. So far it is the rule with the planets. But of the fixed stars, we chuse the brightest of the first magnitude, which at the time of the eclipse hath commerce with the preceding angles, and is nearest to the ecliptical conjunction. We also prefer that which at the ecliptic hour is in a visible situation, either rising with, or culminating upon the angle succeeding to the place of the eclipse. By the quality of these, and the signs wherein they fall, are for the most part judged the kind and quality of the accident portended. If they fall in signs of human shape, the effects will fall on the human species; but if they are not of human shape, but of terrestrial, or four-footed, 'tis evident the misfortune will fall upon that species of animals. If the stars and constellations partake of their nature, which fly the dominion of man, evil will occur by their means; but if the affinity be by those

those which are subservient to man's use, it argues the evil will arise through them, as a murrain, rot, or epidemic disease. Moreover, if the ruling places fall in or near the Eagle, or similar constellations, the evil will fall on volatiles, and such chiefly as are apt for the food and sustenance of man; but if they fall in or near the Dolphin, the effects will happen at sea, and destruction is portended to the fleets and navies of that country over which the influence bears the greatest rule. If they happen in tropical or equinoctial signs, the evil comes by intemperate seasons, and by inundations of many waters. If in the midheaven, they threaten evil to the reigning powers of that country over which they preside; and a visible alteration either in its government or laws commonly happens. But the quantity or importance of the event, is known from the greatness of the obscuration, considered with regard to the significators or ruling planets which have dominion with the eclipse. For occidental configurations made to solar eclipses, or oriental to lunar, diminish the effects; whereas, on the contrary, oriental aspects made with solar eclipses, and occidental with lunar, greatly augment them.

The fourth and last consideration is, the knowledge and prescience of the effect, whether good or evil; and this we know, from the virtue of the stars ruling or claiming dominion over the principal places of the figure; and from the mixture which they have with each other, and with the influences of the eclipses over which they have dominion. For the Sun and Moon, as it were, rule and govern the stars; because they have a certain power and dominion over them. And the speculation of the mixture of the stars, as they are subordinate to each other, manifests the quality of their effect; and hence it is that the effective power is deduced, whether good or bad, from the temperature of those significators which hold the dominion and produce the effect, agreeable to their own proper nature and quality, as hath been heretofore abundantly shewn.

To reduce what has been said into practical observation, we will revert back to the foregoing scheme or figure of the heavens, erected for the Sun's entrance into Aries, in the spring of the year 1789. The signs and significators in this horoscope, are to be considered in the same manner, and with the same quality and influence, as in a nativity; only their properties, instead of being applied to the faculties of an individual, are to be considered as the representatives of Princes and States, and holding the respective influences over them, by virtue of their peculiar quality and affinity to those quadrants and parts of the terrestrial globe, as hath been respectively allotted them, and which is fully explained in the introductory part of this work.

The

The scheme being erected for the meridian of London, of course its application applies most nearly to the affairs of this country; but in a secondary degree to our natural enemies and allies, and to the general affairs of the northern hemisphere. For if great exactness be wished in any particular calculation, the scheme must in all such cases be erected for the precise latitude of the place or province to which the calculation more immediately appertains; and where any struggle exists, or event is foreboded between any two particular states or empires, the safest way is to erect a scheme for the meridian of each, and to examine them by the same rules as have been laid down for comparing a revolutionary figure with the radix of a nativity.

In the figure before us, we find twenty-seven degrees fifty-two minutes of Capricorn ascend the eastern horizon; with thirty minutes of Sagittarius upon the cusp of the midheaven; which imports in a general view peace and honour to the government of Great Britain. Saturn we find is Lord of the ascendant, in conjunction with Mars, lord of the ninth and second houses; and Venus lady of the third and eighth, in familiar congress with Mercury, lord of the fourth, fifth, and eighth houses. These are configurations particularly interesting and important, and being in the watery sign Pisces, they forebode amazing struggles and contentions upon the continent, in which France, Germany, Russia, and Turkey, will be most essentially concerned.

Now if we examine the introductory part of this work, page 100, &c. we shall find Great Tartary, Sweden, Russia, &c. under the sign Aquarius; and that Muscovy, Saxony, Turkey, &c. are under the sign Capricorn; and are consequently represented by the ascendant of this figure, and by the ponderous planet Saturn. The countries under the sign Scorpio and Aries, which are the houses of Mars, are England, France, Germany, Poland, Denmark, &c. and therefore Mars becomes significator of them, and being in conjunction of Saturn, foreshews violent debate and contention between them. Those countries that are under Taurus and Libra, are Ireland, Russia, Poland, South of France, Austria, &c. and therefore under the planet Venus; and the places under Virgo and Gemini, are Flanders, America, &c. with the cities of London, Paris, Versailles, Lyons, &c. and Mercury being lord of these signs, must of necessity more or less unite those powers in this counsel of state, held in the watery triplicity. And as Jupiter disposes of all of them, and is in his own exaltation in the sign Cancer, and in the sixth house, it represents in a most extraordinary and pleasing manner the peculiar state of Great Britain, which he disposes to peace and amity with all the contending states; particularly as Jupiter is in his essential dignities.

The

The sign Cancer, wherein Jupiter is posited, is the sign under which the city of Constantinople is seated ; and therefore represents the Grand Signior, and as Jupiter is posited therein, it declares he will not be overthrown or conquered, though assailed on all sides by powerful enemies ; but what is worse, I find there will be occasional insurrections amongst themselves, which is declared by the Moon's approach to the opposition of Jupiter ; but as the Moon is disposed of by Saturn, and in sextile to her disposer, and her disposer beholding Jupiter with a good trine aspect, it declares that the evil which hath been stirred up by the enemies of the present Signior, shall be defeated and eventually done away by his successor, who will commence his reign in the midst of those troubles, with the most vigorous preparations for war, though his inclination is for peace ; which will be at length brought about by the aid and interposition of those powers pointed out by Mercury, Venus, Mars, and Saturn, who are all in conjunction in the ascendant, in the dignities of Jupiter, Mars, and Venus ; and these three planets declare that Great Britain shall be the principal actor in bringing all animosity to a conclusion between Sweden, France, Russia, Denmark, and the Grand Turk. This appears to be the natural interpretation of the effect of these four planets in the ascendant, in the vernal equinox ; but to know when these matters will come to pass, we must have recourse to new figures for the Sun's entrance into the next two tropical points, and the equinoctial sign Libra, and must likewise observe the preceding full Moon, and the new Moon succeeding, according to the doctrine of the immortal Ptolomy, heretofore laid down ; as well as to observe the dignities and debilities of the planets, whence particular judgment will arise the same as from the directions in a nativity, and afford pleasure and satisfaction to the speculative mind.

The significators which represent the Court of France, shew a disposition to disturb the peace of Great Britain, through the insidious and ambitious views of a female, who takes the lead in state affairs. The active position of Venus and Mercury conjoined in this scheme, denotes much restlessness and instability in the councils of that country, which seem distracted by the arbitrary will of the Gallic Queen, here represented by Venus, upheld and assisted by light, volatile, time-serving men, pre-noted by Mercury, the creatures of the Queen, who from motives of avarice, and views of ambition, will be forward to raise cabals ; to oppose the common hopes and interests of the people ; to plunge the nation into discord and contention, and eventually to bring about disputes with their neighbours, or wasteful war among themselves. Saturn the significator of the French King, being united in a friendly conjunction with Mars, the

the co-significator of Great Britain, and disposed of by Jupiter, the princely significator of George the Third, shews that amity and concord will still exist between the two powers, notwithstanding their domestic broils, and the endeavours of restless spirits to stir up the minds of the people to rapine and war. Hence will probably follow great disturbances amongst the heads of the church, and lead to new discoveries in the annals of popish superstition and religious persecution, which the people of that unhappy country seem inclined to shake off, with the shackles of slavery, misery, and want. In fine, here is every prospect, from the disposition of the significators in this scheme, that some very important event will happen in the politics of France, such as may dethrone, or very nearly touch the life of the king, and make victims of many great and illustrious men in church and state, preparatory to a revolution or change in the affairs of that empire, which will at once astonish and surprise the surrounding nations.

England, I am happy to say, has every prospect of harmony and peace; and from the superior strength and elevation of her significators, will give laws to her enemies, and peace and prosperity to her allies. She will be looked up to from the belligerent powers in the north, to interpose her potent arm to bring about a restoration of peace amongst them, and to awe, with her thunder, those who aspire to extend their dominion by the ravages of war. In the internal management of her affairs, the present epoch will be glorious; and save a few anxieties amongst party men, and a temporary alarm for the scarcity of corn, which will be augmented by the uncommon continuance of wet weather, occasioned by the long stations of the Moon and other significators in the watery trigon, I do not see any probability of the peace and harmony of Great Britain being disturbed by the present contentions between other states; but on the contrary, she will act as a mediator between them, and will advance in glory and renown over every part of the habitable globe.

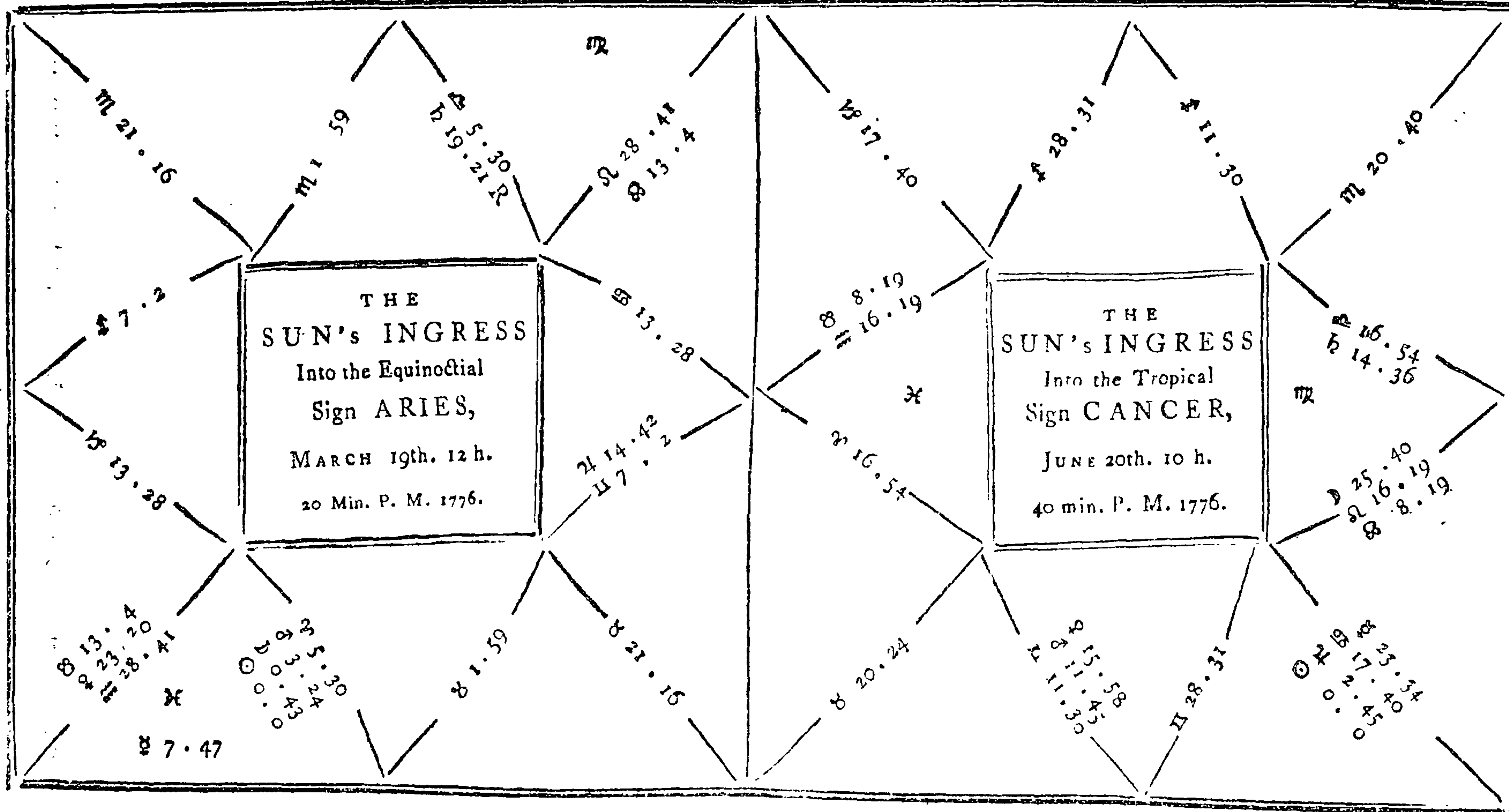
Having said thus much upon the vernal scheme or figure of the heavens, for the year 1789, I shall in this place call the attention of my reader to that remarkable æra in the British history, which gave independence to America, and reared up a new Empire, that shall soon or late give laws to the whole world. The revolution carries with it something so remarkable, and the event is so important to this country, that I shall make no apology for introducing the scheme of the heavens for the spring and summer quarters of the year 1776, when this revolution happened, and for examining and explaining the same, according to the rules I have so amply laid down for that purpose. The Sun's revolutionary ingress into the sign

Aries, in the year 1776, under which the independence of America was established, and the face of the heavens at the summer solstice, may be seen in the annexed figures, which were calculated with great accuracy and precision for this purpose.

In the vernal equinox, we find Jupiter is lord of the ascendant, and in his detriment. Mars we find in Aries, which is the ascendant of England, strong and powerful in his own house, but under the earth. The Moon, who represents the common people, we find under affliction, being combust of the Sun; and Mars being combust also, foreshews that poor England, though her internal strength is great and permanent, yet she will this year be accidentally afflicted and depressed; more especially as we find Mars going to an opposition of Saturn, and Saturn uncommonly strong in the midheaven, in his exaltation, and beheld by the two fortunes Jupiter and Venus; and consequently superior to Mars in power and dignity, who is under the earth, and combust of the sun, though located in his own house; which in this case serves however to shew the permanency and stability of Great Britain, during the whole of this trying conflict.

In this figure the planet Saturn is the significator of America, and Mars represents the people of Britain; as may very easily be seen by taking down the dignities of Saturn and Mars, according to the table in page 130 of this work. That Saturn hath the superiority of power, and that Mars and Saturn are inimical in their nature to each other, are facts too evident to be denied; and as the aspect which is about to be formed between them is a malevolent one, namely, a partile opposition, it declares the event shall be such as to cause a total and eternal separation of the two countries from each other; and that the congress, which is represented by Saturn, will establish an independent and complete revolution, which shall be built upon a firm and durable foundation; and the increasing strength and durability of the new state, is represented by Saturn in his exaltation, supported by the benefic rays of the two fortunes. And since there is a remarkable reception between the two planets Saturn and Venus, i. e. Venus in the house of Saturn, and Saturn in the house of Venus; supported by a propitious trine aspect of Venus and Jupiter, while Jupiter and Saturn, and Saturn and Venus, with the three preceding planets, occupy and possess the whole expanse of the heavens! Whence it is declared, that whatever is effected under this revolution of the Sun's ingress into Aries by the Americans, shall not only be permanent and durable, but shall be supported by those three grand pillars of state, wisdom, strength, and unanimity; which are pointed out by those three planets, agreeable to their tendency and nature, viz. Saturn, strength and durability; Jupiter,

SCHEME of the SOLAR INGRESSES governing the YEAR 1776.



LATITUDES of the PLANETS at the VERNAL EQUINOX.

♈ 2 36 North.
♉ 0 18 South.
♊ 0 44 South.

♋ 0 27 South.
♌ 0 53 North.
♍ 3 42 South.

To face page 1052.

Jupiter, wisdom, and justice; and Venus, unanimity, and perseverance; and their mutual trine aspect to each other, is expressive of future perfection and harmony; so that if we attentively contemplate the above position of the heavenly bodies, we shall find no point strained, to shew their natural tendency towards the good fortune and success of the Americans; and consequently the disappointment and prejudice of the British arms and administration.

We shall now take notice of the time in which this extraordinary revolution should come to its crisis, or completely take place, as pointed out by the several significators in the figure. To do this, we must equate the distance of Mars from Saturn, they being the two principal actors in this revolution. Their distance is taken by right ascension, according to their latitude; because Mars which is the significator of Great Britain, is within three degrees of the cusp of the fourth house.

					deg.	min.
The right ascension of Saturn is	-	-	-	-	18	52
The Right ascension of Mars is	-	-	-	-	2	30
						<hr/>
Subtract, and the remainder is the distance of Mars from Saturn	-	-	-	-	16	22

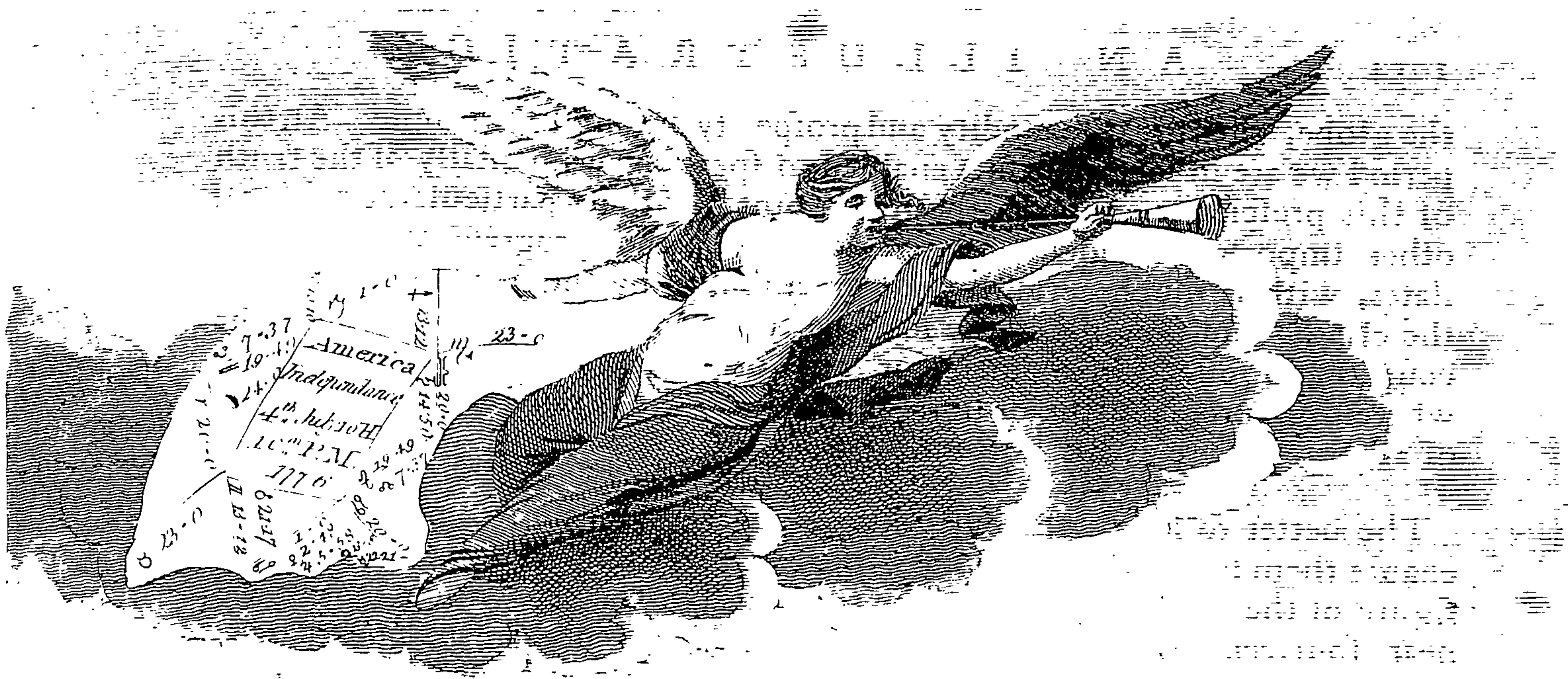
Which arch of direction must be converted into time, by adding to it the right ascension of the Sun, as taught in the doctrine of nativities; by which rule we are to examine how many days the Sun takes in going that space in the ecliptic; and this being an annual revolution, with the two significators in common signs, which denote weeks, we must therefore allow for each day's motion of the Sun, one week; by which it will appear that the crisis or effect of the opposition of Mars and Saturn came up in fifteen weeks and two days, from the time the Sun came into the first scruple of the equinoctial sign Aries; at which time to a day the Americans declared themselves independent of the British Government, and became a free state.

At this time the heavenly intelligencers were posited as in the Scroll presented by the hand of Fame in the annexed plate; and from whence the following conclusions naturally follow. So many significators being posited in the fifth house, in the watery and fruitful sign Cancer, the sign or house of the Moon, with the Moon in the ascendant; and Venus, Jupiter, Sol, and Mercury, all beholding the ascendant with a trine aspect, clearly evinces that the state of America shall in time have an extensive and flourishing commerce; an advantageous and universal traffic to every quarter of the

the globe, with great fecundity and prosperity amongst the people. At this period we are in some measure enabled to speak experimentally of the truth of this prescience ; though the stars point out these particulars, with all other important incidents relative to the rise and progress of the united states, with as much certainty and precision, as by the Moon we calculate the ebbing and flowing of the sea, the times and periods of eclipses, the courses and effects of comets, or any other extraordinary phænomena, wherein nature, and the ordinations of God, the great and primary cause of all things, are at the bottom.

The better to satisfy the curious in these mundane revolutions, and to enable them to draw conclusions with greater exactness, I have subjoined the figure of the Sun's ingress into the tropical sign Cancer, which took place near fourteen days before the Americans declared their independence ; and what is very remarkable, Mars, who is the significator of Great Britain, is disposed of in the *imum cœli* by Mercury, the significator of the French King, who when the Sun entered into Aries, was lord of the seventh house, the house of public enemies, of falsehood, and deceit. He likewise disposes of Jupiter, lord of the ascendant at that time, which had co-signification with Mars, in representing the people of England. From these remarkable positions and effects, we may fairly conclude, that the Americans had not only the French nation to assist them, but had many strong and powerful friends in Great Britain, who should support the cause, and second the exertions of the French in establishing their independence.

It is to be noted, that in the preceding figure of the Sun's entrance into Cancer, Mars is found in conjunction of Venus ; and although Venus is a fortune, and declares England should not be ruined by the strong influence of Mercury their dispositor, yet she softens and takes off the warlike courage and intrepid impetuosity of Mars, and inclines him more to amity and peace, than to bloodshed and slaughter. Besides, we find the Sun, who is king amongst the planets, instead of being in conjunction of Mars, the implicative aspect of war and conquest, he is in conjunction with Jupiter, who is the natural significator of peace and concord ; so that the Sun's ingress into Cancer, declares that the counsels of his Britannic Majesty should not prove effective, nor his arms victorious ; but inclined only to push on a defensive war with the Americans, as the nature of their situation, and the necessity of the times might require, though an unlimited thirst for conquest was predominant ; which exactly corresponds with the situation of the heavenly ordinances at the time the Americans chose to declare their defection from the mother country.



Revolution of America

At this time Jupiter and Venus were in conjunction, and appeared to meet as counsel with the Sun and Mercury in the celestial orb, in that part of the heavens appropriated to the mansions of the Moon. The Moon was then also arrived at the opposite point of that particular place in the heavens, were she was posited at the time of the ingress, and disposed of by Saturn the significator of America. Hence it will appear, that if we read the history of the American war, and examine with attention the various transactions of those who were the principal actors in the business, and compare the result with what is prenoted by the foregoing figures, according to the rules heretofore laid down to determine planetary influx, we shall find no difficulty in tracing every important event, with astonishing exactness and precision, that can in any shape relate to this department of the astral science.

I could here add a variety of other examples, in support of astral influence upon synods and states, and in promoting, as second causes under heaven, the rise and fall of empires, and the revolutions of the world. But enough has surely been said to illustrate this enquiry to the fullest extent, and to render it obvious to the meanest capacity, particularly as the nature of the planets and signs, and the houses and mansions of the heavens, continue unalterably the same in all cases, with respect to their influence and tendency; and require only to be applied to the nature of the question, nativity, or revolution, which ever it may chance to be, agreeable to the rules so amply given for that purpose; and I will be bold to say, that the utmost satisfaction will result to every sober enquirer, the more he pursues, and the deeper he contemplates this incomparable study.

I am not, however, to expect, that all men will be converts to my opinion, or subscribe to the evidence I have so abundantly brought in defence of my doctrine. The self-willed, and the classically obstinate, are not to be moved by any species of reasoning, incompatible with their own way of thinking; and it would be the extreme of folly, after the arguments I have adduced, to attempt to remove that mist from before their eyes, which blinds their reason, and contaminates their sense. If proofs of all denominations, and the experience of every day and hour we live, are incapable of impressing the mind with the truths of elementary influx and sidereal affections, it is not all my faint ideas can furnish through the medium of my pen, that will either penetrate the heart, or operate to convince on this occasion. Others there are, who most cordially believe whatever their own eyes and their own ears can demonstrate; but who are insusceptible to every occult property, and to the secret

influence and effect of second causes. Yet they know there is a secret power in the magnet, which they can neither see nor comprehend. They are sensible of all the phenomena and surprising properties of air, though they cannot see it, nor demonstrate its particles. They admit the ebbing and flowing of the tides, and allow the Moon produces the effect; yet in the same moment they deny her influence, and question the ordinations of Providence. To contend with such men, would be ridiculous and absurd, since it could neither support arguments, nor alter facts; nor would the sanction or applause of such a description of beings add either to the merit or reputation of the science.

END of the THIRD PART.

AN
ILLUSTRATION
OF THE
CELESTIAL SCIENCE
OF
ASTROLOGY.

PART the FOURTH.

CONTAINING THE
DISTINCTION between ASTROLOGY,
AND THE
WICKED PRACTICE of EXORCISM.

WITH A GENERAL DISPLAY OF
WITCHCRAFT, MAGIC, and DIVINATION,
FOUNDED UPON THE
EXISTENCE OF SPIRITS GOOD and BAD, and their
AFFINITY with the Affairs of this WORLD.

By EBENEZER SIBLY, ASTRO. PHILO.

PRINTED IN THE YEAR MDCCLXXXVIII.

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I L L U S T R A T I O N
Of the C E L E S T I A L S C I E N C E of
A S T R O L O G Y.
P A R T the F O U R T H.

FROM what has been premised in the foregoing parts of this work, it will now become manifest to every unprejudiced reader, that Astrology, and Magic, how much soever they have been confounded with each other, and considered by the vulgar as one and the same doctrine, are nevertheless two very opposite and distinct pursuits. The one not only supposes, but in truth is, an attainment of the contingencies and events of futurity, from a natural cause implanted in the motion and influence of the spheres, which it is at once honourable and praiseworthy to study; the other, an acquirement of particular events to come, or mischiefs to be performed by means of occult spells, diabolical incantations, the agency of spirits, or confederacy with the devil. This constitutes what is termed Magic, Exorcism, Witchcraft, and Divination, very aptly termed, “The Black Art,” which it shall be the principal object of the following pages to illustrate; as well to give the reader some rational idea of that very ancient but mischievous practice, as to clear the sublime contemplation and study of the stars from the gross imputations it hath on that account sustained.

I have no doubt but the greater part of my readers, and perhaps, the bulk of mankind at this day, totally disbelieve the possibility of witchcraft, magic, or divination; because, they deny the very existence of spirits, the agency of the devil, and the appearance of ghosts or spirits of deceased men, upon which belief the practice of the black art entirely depends. But however incredulous the wisest critic may be, as to what has been related on this subject, certain it is, that such spirits really do exist, and that confederacy and compact with them, was in former times

no uncommon thing. Blackstone seems to have established this fact in a very satisfactory manner, where he speaks of the laws formerly provided in this country against magicians and witches, and those who held confederacy with spirits; which to disbelieve, would not only be found to militate against numerous important passages of scripture, but would call in question the express words of our Saviour himself, and give the lie to authors and attestators of the first reputation and character. Indeed, the force of Revelation, and the doctrine of Christ, depend entirely upon our opinion of the existence of spirits; for that being confessed or doubted, either affirms or denies the eternity of the soul.

Those persons who have taken pains to contemplate the nature and structure of man, will have no difficulty to believe, from the principles of reason and common sense, that a soul, essence, or spirit absolutely exists within his body, totally independent of all material functions or desires; that flies in his face upon the commission of every unjust or improper act, and that leads the human ideas to a state of being, infinitely beyond the bounds of the terrestrial globe, and unconstrained by the limits of time. This applies to the essence, soul, or spirit of man; whereas the body, being compounded of the elements of this world, is swayed, ruled, and eventually overcome by them, in proportion as the elements operate upon one another, so as to produce diseases, imbecility, and death.

As it is agreed by all authors, and admitted in the creed of all sects and persuasions of people, that before the fall, the seasons and elements, were in one unalterable state of perfection and harmony; so the condition of man was not then under the power of the elements, but he was cloathed with purity and immortality, as with a garment. The external gross elements had then no sway; and the astral powers, instead of inflaming his desires, contributed unto him the influences of like unto like, forming an union of delectable ideas between soul and body, which led to the unabated praise and adoration of his beneficent Creator. The pure elements were then congenial to his state of immortality, and the astral powers were turned upon his back, while innocence and incorruptibility smiled on his brow. His food was not limited to palpable matter, but was combined with the pure etherial spirit of the universe, which perfumed the air, and enriched the seat of Paradise.

Such was the prime-aval happy state of man. But departing from his innocency, by the secret insinuations infused into his mind by the fallen spirit Satan, he lusted after palpability in the flesh, turned his face to the elements, deserted his reason and his God, and fell from his ethereal

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Fig. 1.

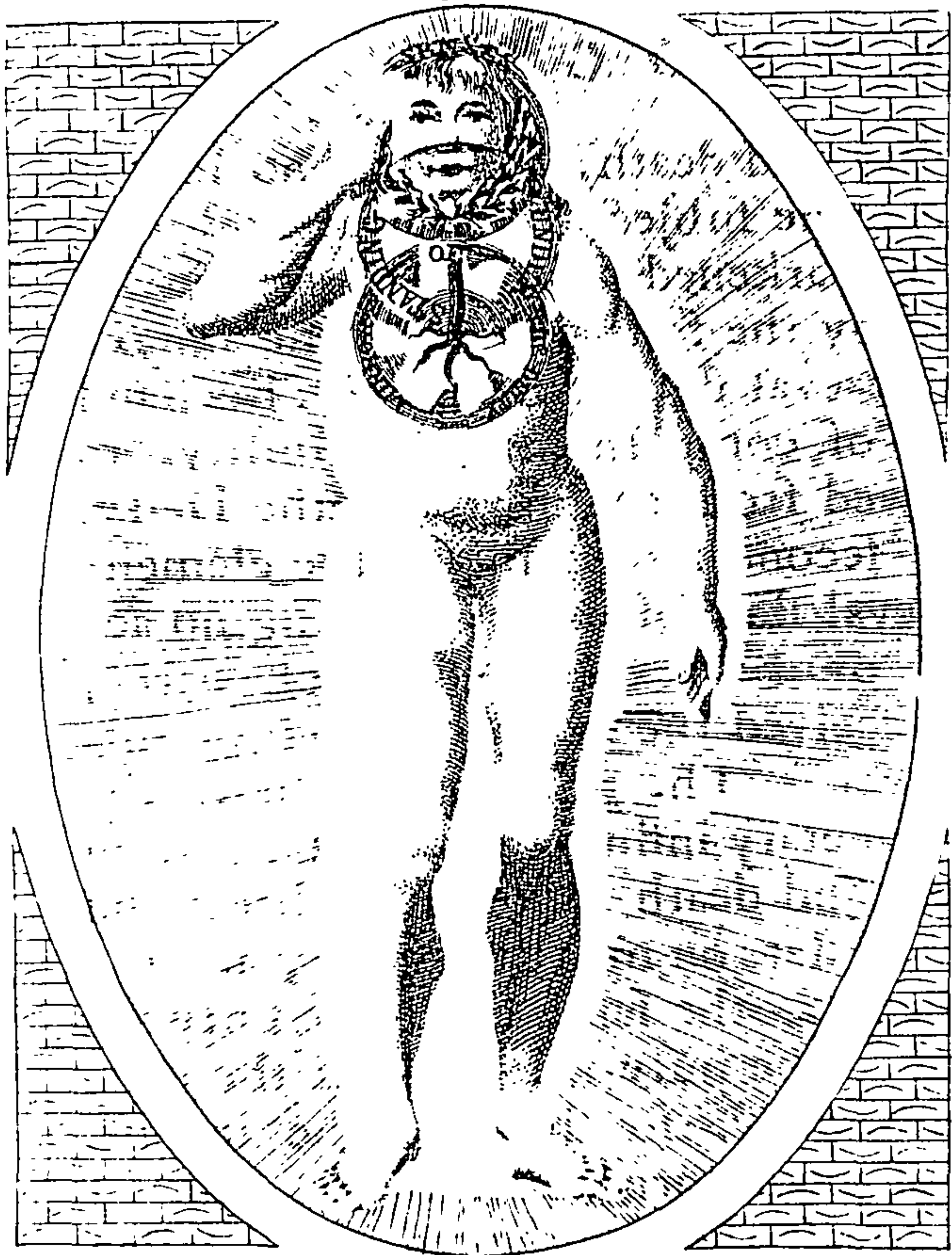


Fig. 2.

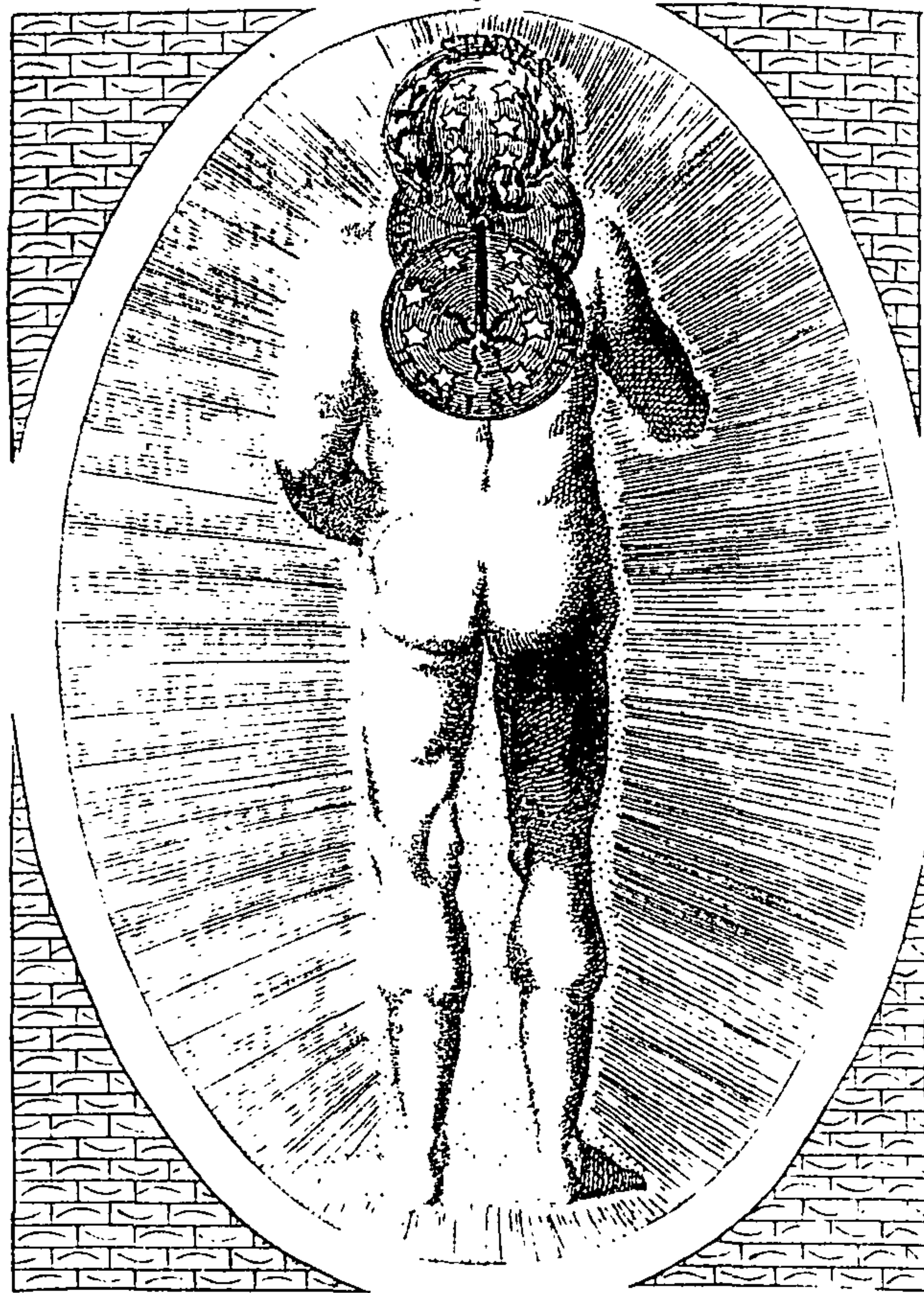


Fig. 3.

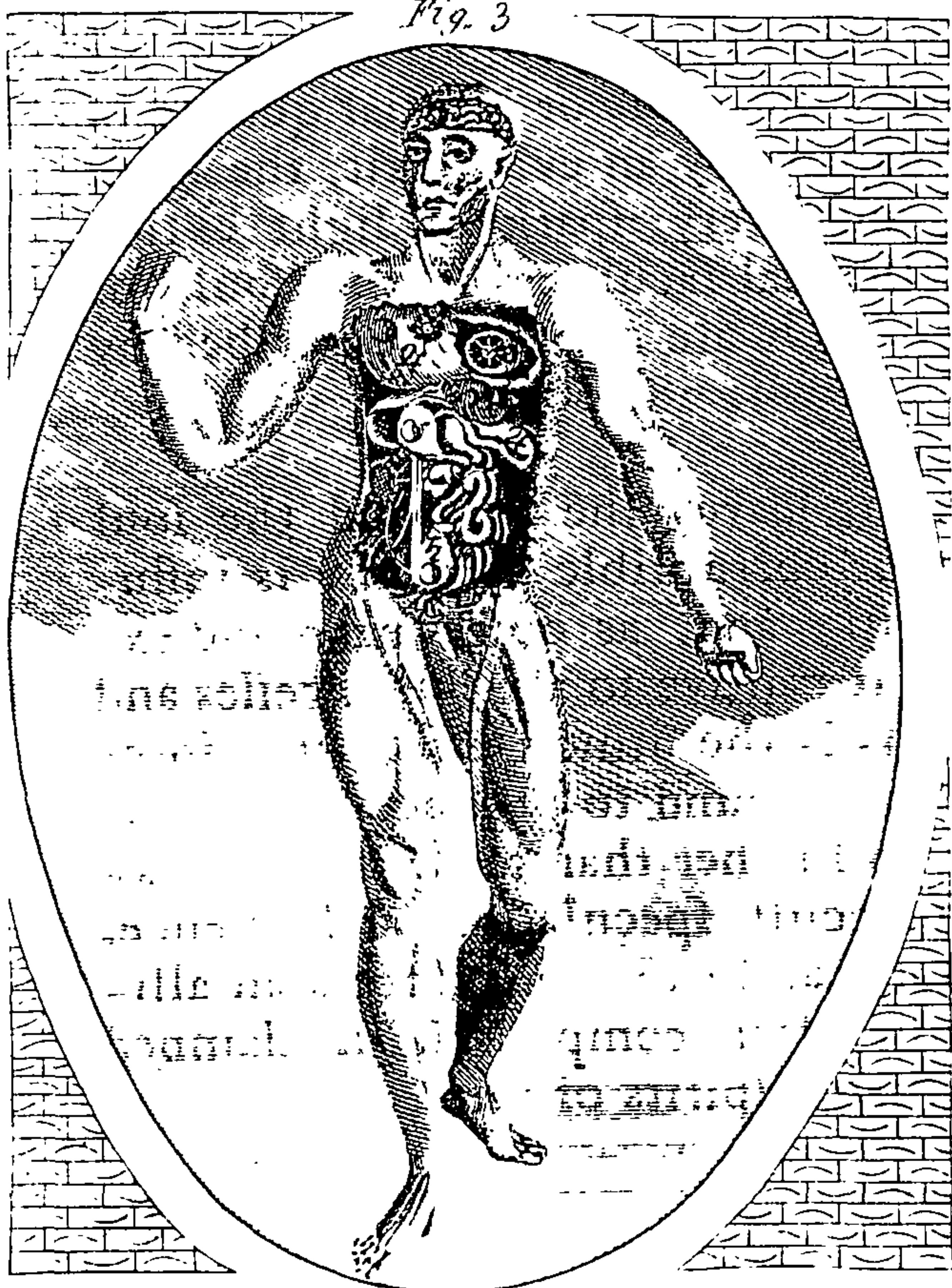
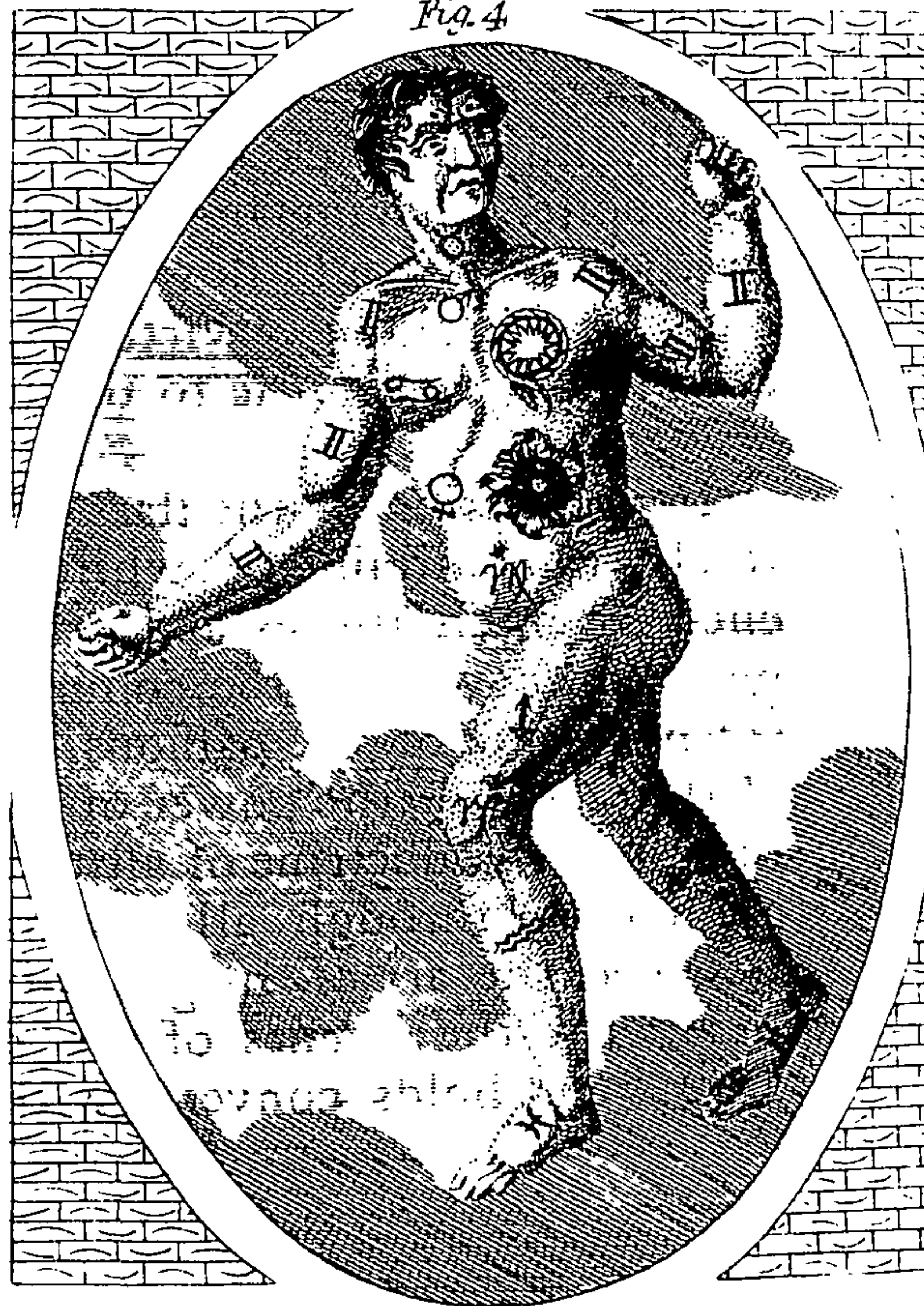


Fig. 4.



real state, into all the perils of mortality and death. Having no longer all powers under his subjection, he became subject to sidereal and elementary influx, with his understanding darkened, and his mental faculties abridged; which I have exhibited by the four figures in the annexed plate. The first represents the prime-aval state of man, with his hand lifted up to his head, denoting the seat of comprehensive sensibility, to which the light of reason and sense flowed from the mirror of the Deity, in whose image he was formed. The second figure shews the elementary and astral influence in the prime-aval state of man, as having no action whatever internally, but falling on his exterior or back parts; whilst his face, turned to the light, received the beatific vision of immortality and life from the gate of heaven. The third figure shews the internal action of the elementary and planetary influx after the fall, upon the vital parts of man, whence diseases and death follow in a direct and regular course. For as the action of the stars on man are agents, and the elements of which he is composed patients, the same as in the outward world; so we find, as they are situated in the outward world at the time of birth, either as to strength or imbecility, so shall be the inward weakness or vigour of the vital parts of man born under them; and of such shall be the inbred quality of the disease thus implanted in our fallen nature to bring on corruptibility and death. The fourth figure is intended to shew a faint resemblance of an abandoned and more degenerated state of fallen human nature, when the will and passions of man are given up to vice, and contaminated with the gross or bestial quality of deadly sin and wickedness. He is led captive by an evil spirit, the agent of Lucifer, having his will darkened, and every spark of light extinguished, that could flow from the intellectual faculties of the soul, or from the collision of virtue and sense. Such are the men described by St. Paul in his Epistle to the Romans, chap. i. 28, 29, 30.

In this action of the stars upon man, it leaves the will and the soul totally unconstrained; whilst the body or corruptible part only is influenced, which allures and attracts the will; and, as observation and experience shews us, too commonly leads it captive to all the excesses and intemperance of the passions. But as this is the utmost effect the force of the stars, or the power of the elements is found to produce in our nature; so the doctrine of astrology goes no further than to define and explain them through all the tracks of occult speculation and science. Whereas the art of magic, of divination, and exorcism, forms an alliance with the agents of the devil, lusts after compact with damned souls, and holds converse with the departed spirits of men.

To

To illustrate this extraordinary practice of the ancients, I shall here consider the nature of the world of spirits, their quality and office, and the affinity which they bear to this world, agreeable to the doctrines laid down by those ancient authors, whose works are now rarely to be seen, though sanctioned by the most remarkable experiments, and confirmed by the strongest evidence that can be collected at so distant a period.

The noble and learned Swedenbourg, whose nativity we have considered in the foregoing part of this work, has with great ingenuity explained the nature and situation of the departed spirits of men, after their recess from this life. The world of spirits, says this author, is neither heaven nor hell, but a place or state betwixt both, into which man immediately enters after death; and after staying there a certain time, longer or shorter, according to what his past life had been in this world, he is either received up into heaven, or cast down into hell. It must be noted here, that this intermediate state, has nothing in it of the probationary kind; for that is all over with the life of this world; but is a state of a separation or reducing every one to his own proper prevailing principle, and as such finally preparatory for an eternal happiness or misery.

In the world of spirits, is always a very great number of them, as being the first resort of all, in order to their examination and preparation; but there is no fixed time for their stay; for some are translated to heaven and others consigned to hell soon after their arrival; whilst some continue there for weeks, and others for several years, though none more than thirty, this depending on the correspondence or non-correspondence between the interior and exterior of men. As soon as they arrive in the world of spirits, they are classed according to their several qualities, inclinations, and dispositions. The evil, with such infernal societies as they had communication with in this world, in the ruling passion; and the good, with such heavenly societies as they had communicated with in love, charity, and faith. But however they are diversely classed, they all meet and converse together in that world, when they have a desire so to do, who have been friends and acquaintances in this life; more especially husbands and wives, brothers and sisters, &c. But if they are according to their different ways of life, of different inclinations and habits of mind, they are soon parted; and it may be observed, both concerning those who finally go to heaven, and those that go to hell, that after their arrival in those two different kingdoms, they no more see or know one another, unless they are of like minds and affections. The reason

reason why they meet and know one another in the world of spirits, and not so in heaven or hell, is, because in the world of spirits they pass through the same state they were in in this life, and so from one to another; but afterwards all are fixed in one permanent state respectively, according to the state of that love which prevails in them, in which one knows another from similarity of condition; for similitude joins, but dissimilitude separates.

As the world of spirits is a middle state with man, between heaven and hell, so it is also a middle place, having the hells underneath and the heavens above; all the hells are shut next to that world, except that some holes or clefts like those in rocks or caverns, are left open; and these so guarded, that none can pass through them but by permission, which is granted on particular occasions. Heaven likewise appears as fenced all round, so that there is no passing to any of the heavenly societies, but by a narrow way, which is likewise guarded. These outlets and inlets are what in scripture are called the doors and gates of heaven and hell.

The world of spirits appears like a valley, between mountains and rocks, here and there sinking and rising, the doors and gates opening to the heavenly societies, are only seen by those who are in their preparation for heaven; nor are they to be found by any others. To every society in heaven there is an entrance from the world of spirits, after passing which there is a way, which as it rises branches into several others: nor are the doors and gates of the hells visible to any but those that are going to enter therein, to whom they are then opened; at which time these appear like as it were, dark and sooty caverns, leading obliquely down to the infernal abyss, where there are also more gates. Through those dark and dismal caverns exhale certain foetid vapours, which are most offensive to the good spirits; but which the evil ones are greedily fond of; for as were the evils which any one took most delight in when in this world, such is the stink corresponding thereto which most pleases him in the other; in which they may be aptly compared to those birds or beasts of prey, as ravens, wolves and swine, which are attracted by the rank effluvia emitted from carrion and putrid carcases.

There are also in every man two gates, the one of which opens towards hell, and to all that is evil and false proceeding therefrom; the other gate opens towards heaven, and to all that good and truth issuing thence. The infernal gate is open in those who are in evil, and they receive from above only some glimmering of heavenly light, just suffi-

ent to serve them to think, reason, and talk of heavenly things ; but the gate of heaven stands open in those who are good and in truth. There are also two ways leading to the rational mind in man ; the superior or internal, by which good and truth is communicated from the Lord ; and the inferior or external way, by which evil and false are communicated from hell, and the rational mind is in the midst of these two ways ; hence it is, that as much of the heavenly light any man receiveth into his mind, so far is he truly rational ; and so much as he admits not of it, in such proportion he is not rational, however he may think himself so. These things here offered, shew the correspondence that subsist between man and heaven and hell ; for his rational mind, during the formation of it, corresponds to the world of spirits, things above it being in heaven, and things beneath it in hell ; the former are opened, and the latter (as to all influx of evil and the false) are shut, with respect to those who are in their preparation for heaven ; but, on the other hand, the things from beneath are opened, and the things above are shut (as to all influx of good and truth) with respect to those who are in their preparation for hell ; consequently the latter can only look down to the things beneath them, or to hell, and the former only to things above them, or to heaven. Now to look up is by correspondence, to look to the Lord, who is the common center to which all heavenly things point their aspect and tendency ; but to look downwards is to turn from the Lord to the opposite center of attraction, and consequently to all things of a hellish nature.

These considerations are applied only to the immediate after-state of the soul and spirit of man, as the consequence of the mortality of this world. Many there are, however, who entirely disbelieve the faculty of the soul, or the existence of the spirit ; but whoever rightly considers the matter, cannot but know, that it is not the body, or material part, but the soul, or spiritual part, that thinks within him. Now the soul is his spirit, immortal in all it's properties, and receptive of what is spiritual, as having a spiritual life, which consists in thinking and willing ; consequently, the whole of the rational life appertains thereto, and not to the body, though manifested therein : for the body is only thoughtless matter, and an adjunct or instrument to the spirit of man, whereby it may manifest it's vital powers and functions in this natural world, where all things are material, and as such void of life : it is indeed customary to ascribe action, motion, and power to the body in the common forms of speaking ; but to suppose that the properties belong to the instrument, and not solely to the principle that actuates it, is erroneous and absurd.

As

As all vital power, both of acting and thinking, appertains solely to the spirit, and in no wise to the body, it follows, that the spirit is truly and properly the man, and that without its influence and operation there is neither thought nor life from the crown of the head to the sole of the foot: consequently, that the separation of the body from the spirit, which we call death, takes nothing from that which in reality constitutes the man. For man would not be capable of thinking and willing, unless there were in him a substance to serve as the subject of these operations; and to suppose otherwise would be ascribing existence to non-entity, as may appear from man's not being able to see without that organ which is the subject of vision, or to hear without the organ of hearing; these senses being nothing without such subjects of their operations. Now thought is internal vision, or the sight of the mind, as perception is the internal hearing, and these without internal organized substances, as their proper subjects, cannot exist: so that the spirit of a man has equally a form, and that a human one, as also its sensory and senses, when divested of it's material body, as it had before; for all the perceptive life of the eye and the ear, and of every other sense that appertains to man, is not from his material body, but from his spirit and the vital powers thereof, in all and singular the organs and parts of his body: hence it is, that spirits see, hear, and feel, as well as men, in the spiritual world*, though not in this natural world after their separation from this mortal body. That the spirit had natural sensations in this world, was owing to it's union with a natural or material body; but then also it had it's spiritual senses in various modes of thinking and willing.

The foregoing doctrine is here offered, to convince the rational reader, that man, considered in himself, is a spirit, and that the corporeal part of his composition annexed to him in this natural and material world is in order to his relation thereto, and what he has to do therein, but is not the man himself, but only designed to be instrumental to the operations of his spirit: but, as few are capable of receiving abstract reasonings,

* To suppose a human spirit void of a human form and senses, is to annihilate the very idea of spirit; for as every essence has it's proper form, and every form it's own essence, (they being necessary corrolatives) so every spirit has it's body suited to the world it belongs to, according to that distinction laid down by the apostle: "There is a natural body, and there is a spiritual body:" and indeed, it is as rational to conclude, that a human spirit should have a human, organized body endued with spiritual senses in a spiritual world, as that the same spirit should be invested with a material organized body with natural senses in this natural world. It is to be lamented, and the more for it's tendency to promote infidelity, that many of the learned, so called, have in a manner defined and refined spiritual nature into nothing, by divesting it of substantiality, to which it has a more peculiar right by far than matter; nor is the body of an angel less substantial in a proper sense of the word than a solid rock, though not according to the condition of material nature. Upon the whole, the common ideas of the vulgar and illiterate come much nearer to the truth and reality of heavenly things, than the vain conceits of such speculating sciolists.

and

and many are apt to run them into matter of doubtful disputation, by arguments drawn from fallacious appearances of sense, I chuse, for confirmation of the doctrine in hand, to appeal to truths founded on experience. Such as have confirmed themselves in the belief of the contrary side, are given to think, that as the beasts have life and sensations as well as men, so they have both the same spirit and the same end; but this is a gross error, as the spirit of a beast immensely differs from that of a man; as being destitute of that sublime principle of a heavenly life, by which the latter is made receptive of the divine influx, and capable of being exalted to a participation of the divine nature; and therefore it is that man is so highly privileged above the beasts, that he can think of God, and the things pertaining to his kingdom both in heaven and earth, and be led thereby to love the Creator, and to be united to him: now that which is in the capacity of such union is not liable to perish, like that which is not. For there is in every angel and in every man an inmost and supreme degree or part; which more immediately admits the divine influx from heaven, whereby all that is within man in the inferior degrees are orderly disposed and regulated. This inmost or supreme part of the spirit or soul, may be called the Lord's entrance into angels and men, nay, his very habitation in them; and hereby it is that man is distinguished from the brute animals, which have it not, and is rendered capable of near communications with heaven in the inner man, of believing in the Deity, of loving him, and of seeing him: nay, from hence it is that man is a recipient of understanding and wisdom, and also that he is endowed with a rational life, and an heir of immortality: but how or what the Creator operates in this inmost recess or supreme part of man, exceeds the capacity of an angel to comprehend.

When the body of a man is no longer able to perform it's natural functions corresponding to the thoughts and affections of his spirit, and which are derived to him from the spiritual world, then he is said to die; which comes to pass when the lungs and the heart cease their respiratory and contractile motions; not that man then suffers extinction of life, but only is separated from that corporeal part of his composition, which served him for an instrument of usefulness in this world; but he still continues a living man, and that in a proper and literal sense of the expression, inasmuch as man receives his denomination not from his body, but from his spirit, since it is the latter that thinks in him, and that thought with affection essentially constitute the man; so that when any man is said to die, it means no more than that he passes from one world into another; and hence it is, that by *Death* in the Scripture, according to the internal sense of the word, is signified resurrection, and continuation of life.

There

There is a very near communication and correspondence betwixt the spirit and respiration, and the motion of the heart (*systole*) betwixt thinking and respiration, and betwixt the affection of love and the heart; so that when these two motions cease in the body, a separation presently ensues; for these two motions, viz. that which is respiratory in the lungs, and that which is called the systole or contractile power of the heart, are the two bonds of union, which when broken, the spirit is left to itself, and the body, being destitute of life from the spirit, becomes cold and putrefies. That so intimate a communication subsists between the human spirit and respiration, and the heart, is because all the vital motions in this world depend thereon, not only in common, but also in every particular part of the body.

The spirit of a man remains some little time in the body after all signs of life disappear, but not longer than till a total cessation of all power in the heart ensues, which varies according to the nature of the disease he dies of, for the motion of the heart continues long after in some, but not so in others; but as soon as the total cessation of it happens, the resurrection of man commences, and this by the sole power of the Lord. By resurrection here is meant the liberation of the spirit of a man from his body, and the introduction of it into the world of spirits, and commonly called Resurrection. That the spirit of a man is not separated from his body before all motion and power in the heart entirely ceases, is because the heart corresponds to the affection of love, which is the very life of man, for it is from love that every one derives his vital heat; therefore so long as this conjunction lasts, so long the correspondence continues, and it is from correspondency that the spirit actuates and communicates life to the body.

That the form of the spirit of a man is in a human form, or, in other words, that the spirit is the true formed man, may be evinced from many articles, particularly from these, viz. that every angel is in a perfect human form, and also that every man is a spirit as to his inner man; and that angels in heaven are from the human race. This also more evidently appears from man's being denominated man from his spirit, and not from his body, and because the corporeal form is an adjunct to the spirit after it's form, and not contrariwise, the former being but the clothing of the latter. Moreover, the spirit is the sole moving power in man, acting upon and actuating every the most minute part of the body, insomuch that, when any part no longer derives vital influence therefrom, it presently dies. Now the ruling powers which govern the body as their subject, are the thought and the will; but these are from the spirit only, nay, constitute it's very essence. The reason why we do not see any separate spirit, nor yet that of another man whilst in his body, in it's hu-

man form, with our present organs of sight, is because these organs of vision are material, and therefore only capable of discerning objects of a material nature, whereas spiritual things must be seen by a spiritual eye *; but when the corporeal sight is extinguished by the death of the body, and the spirit's eye is opened, then spirits appear to one another in their human form, not only in the spiritual world, but they also see the spirits of those who yet live here in the body.

That a human form is proper to a human spirit, follows from man's being created in the form of heaven, and also receptive of all things of a heavenly nature and order, consequently with the faculty of receiving understanding and wisdom; for whether we express it by the words, faculty of receiving understanding and wisdom, or, the faculty of receiving heaven, it comes to one and the same thing. So that what has hitherto been said on this subject, may be understood by the rational man, from his view of causes and their effects, of premises and their consequences; but not so by the obstinately irrational, and that for many assignable reasons; but principally, because he is averse to all doctrines which are contrary to the false principles that he has adopted in the room of truths; and he that has thus shut up his mind, hath shut the gate of heaven against himself, so that no light from thence can illuminate his rational faculties; and yet that gate might be opened, if his will did not resist. This makes it evident, that they who are in false thinking from an evil principle, might be possessed of a rational understanding, if they were in a willing disposition for it; and that the reason why they are not so, is because they love the false above the true, as more agreeing with the evil they have adopted, and which they chuse to follow. It is to be observed, that to love and to will a thing is the same; for what a man wills he loves, and what he loves that he also wills.

When the spirit of a man first enters into the world of spirits, which is soon after his resuscitation, (of which mention has been made before) he as yet retains the same face and voice that he had in this world, as being hitherto in his exterior state, that of his interior being yet unmanifested; and this is his first state after death: but some time after, his face becomes entirely changed, so as to correspond with the particular affection or love that possessed his spirit when in the body; for the face of a man's spirit differs greatly from that of his body, the latter being

* It is to be noted here, that when spirits are seen by any one in the body, they are not seen with the corporeal organs of vision, but by the spirit of the beholder abstractedly from the body, though the appearance is exactly the same in both cases, as implied in those words of the Apostle, where speaking of his visions, he says, "Whether in the body, or out of the body, I cannot tell."

derived from his parents, but the former a correspondent to his predominant affection, of which it is the signature or image, and which becomes appropriated to man in the other world, upon the manifestation of his interior state; for the spirit of a man rightly considered is the same with his predominant affection or love, and his face is the external form of it. This change respecting faces in those who pass from hence into the other world, is founded on this law, that no dissimulation or counterfeiting is there allowed, but all must appear to be what they really are, and consequently express their thoughts in their words, and their affections and desires in their looks and actions, so that the faces of all there represent their minds respectively. Hence it is, that though all who knew one another in this world are alike mutually acquainted in the world of spirits, yet it is otherwise in heaven and hell.

The faces of hypocrites undergo not their proper change so soon as the faces of others, and that because they have by custom contracted a habit of forming their minds to a kind of imitation of good sentiments and affections, and therefore they appear not uncomely for some time; but as the disguise gradually wears off, and their inmost thoughts and affections manifest themselves, they appear more ugly than others. The hypocrites here spoken of, are such as know how to talk like angels upon divine subjects, and yet in their hearts exalt nature on God's throne, and disbelieve all heavenly truths, acknowledged in the christian church.

It is to be observed, that the human form of every man after death is beautiful in proportion to the love he had for divine truths, and a life according to the same, for by this standard things within receive their outward manifestation and form, so that the deeper grounded the affection for what is good, the more conformable it is to the divine order in heaven, and consequently the more beauty the face derives from it's influx. Hence it is, that the angels of the third or inmost heaven, whose love is of the third or highest degree, are the most beautiful of all the angels; whereas they whose love for divine things had been in a lower degree, or more external than that of the celestial or highest angels, possess an inferior degree of beauty; and the translucent lustre in their faces, as proceeding from a lesser degree of divine virtue within them, is comparatively dim; for as all perfection rises in degrees from the inward to the inmost, so the external beauty, to which it gives life and vigour, has it's degrees in the same proportion.

When a man passes from this natural world into the spiritual, which is at the time of his death, he takes with him all that belonged to him as
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man, and possesses every sense, both external and internal, that he possessed before. Thus, for instance, all in heaven have their sight, their hearing, and all their senses, in far greater perfection than when in this world, and also their minds more abundantly replete with wisdom: for they see by the light of heaven, which greatly exceeds that of this world, and they hear through the medium of a spiritual atmosphere, to which that of our earth is not comparable. The comparative difference between these two senses there and here, is as that of a bright sky to a thick fog, or as the lustre of the meridian sun to the dusk of the evening. Now the light of heaven, which is divine truth, makes manifest the minutest things to the perception of angels, and as their external corresponds to their internal or intellectual sight, so by mutual influx they co-operate in forming the high perfection of angelical perspicuity. In like manner their sense of hearing corresponds to their perception, both in the understanding and will; so that in the sound of the voice, and in the words of the speaker, they can trace the minute particulars of his affections and thoughts; in the sound what relates to his affections, and in the words what concerns his mind or thoughts; but it is to be observed, that the other senses of the angels are not in the same high degree of perfection with those of sight and hearing, and that because the latter are subservient instruments to their understanding and wisdom, and not so the others, which, if equal in power, would lessen their preference to intellectual delights over and above those of their spiritual bodies, as we find to be the case with men in this world, who, according to their greater relish and indulgence as to their grosser senses, have the lesser appetite and sensibility with respect to spiritual things.

A few words shall here be spoken concerning the cultivation of the rational faculty in man. Genuine rationality consists in truths, not in fables. Now truths are of three kinds, civil, moral, and spiritual: civil truths relate to judicial matters, and such as respect public government, and, in a general consideration, justice and equity: moral truths have relation to the conduct of life with respect to societies and lesser connections; in general, to sincerity and rectitude; and in particular, to virtues of every class; but spiritual truths relate to the things of heaven, and of the church on earth; and in general to the good of love, and the truths of faith. There are three degrees of life in every man: the rational part in man is opened to the first degree by civil truths; to the second by moral truths; and to the third by spiritual truths. But let it here be observed, that man's rational part is not opened and formed merely by his knowing such truths, but by living according to them when known,

known, that is, by loving them with a spiritual affection, or the affection of his spirit, or, in other words, by loving justice and equity as such, sincerity and rectitude of manners as such, and good and truth as such; whereas to love them only from external regards, is loving them for the sake of self, for one's own character, honour, or profit; and therefore such a love, as it terminates in self, gives not a man any right to the character of rational, as such a one uses truths as a lordly master uses his servants, viz. for his pleasure or interest: and where this is the case, they make no part of the man, nor open so much as the first degree of life in him, but only have a place in his memory, like other scientific ideas, under a material form, where they unite with the love of self in mere animal nature. Hence it may appear, how man becomes truly and properly rational; viz. in the third or highest degree, by the spiritual love of good and truth, or the things of heaven, and it's representative the church; in the second degree, by the love of sincerity and rectitude; and in the first degree, by the love of justice and equity; which two last loves become spiritual by influx of the spiritual love of good and truth from the highest degree, by joining itself to the inferior loves, and forming in them it's own likeness*.

There are three states which man goes through after death, before he enters into heaven or hell; the first respects his exterior part; the second his interior; and the third is his state of final preparation. These states man passes through in the world of spirits; however, there are exceptions, as some are immediately after death taken up into heaven, or cast into hell; of the former class are they who are regenerated, and so prepared for heaven in this world, and that in so high a degree, as to need only the putting off all their natural impurities, in order to be carried by the angels into heaven. On the other hand, such as have been internally evil, under the mask of externally apparent goodness, and so have filled up the measure of their iniquities by hypocrisy and deceit, using the cloak of goodness as a means whereby to deceive others; these are immediately cast into hell. There are also some who are committed to caverns immediately after their decease, and so separated from others in the world of spirits, but afterwards released, and remanded thither by turns; such are they who, under civil pretexts, dealt fraudulently with their neigh-

* There are three degrees in man corresponding to the three heavens; and as the third or highest heaven does, as it were, sanctify the two inferior heavens by the descending influx of it's celestial superior virtue, so the spiritual love of all that is good and true in man (corresponding to the third heaven) spiritualizes or sanctifies his virtues, though of an inferior class: thus, to give a cup of cold water to another, is a little thing; but when it is the most we can do, and love is in the doing of it, the act has in it the essence of christian charity.

hours; but the fore-mentioned are very few compared to the many classes of those who are detained in the world of spirits, in order to their preparation for heaven or hell, according to the established order of divine Oeconomy.

As to the first state before-mentioned, or that which respects the exterior, this man enters upon immediately after death. Every one's spirit has belonging to it properties exterior and interior; the former are those by which he governs and accommodates the corporeal functions in this world, more especially the face, speech, and bodily gestures, according to his social connections; the latter are proper to his will and free thoughts, which are seldom made manifest by the face, speech, and outward behaviour, man being accustomed through education and example to counterfeit friendship, sincerity, and benevolence, and to conceal his true thoughts even from his infancy. Hence it is, that so many learn the external practice of morality and good manners, however different they may in reality be within, and so, mistaking custom for principle, know not themselves, nor enter into any examination concerning the matter.

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As the life of men newly become spirits is so like to their natural life in this world, and as they are at first strangers to their new state, without knowing any thing more of heaven and hell than what they have learned from the letter of scripture, and their preachers; therefore after wondering for some time at their being clothed with a body, and possessing every sense as in this world, and also at their seeing things under the like appearance as before, they find themselves urged by a desire of knowing what and where heaven and hell are: upon which they are instructed by their friends in things relating to eternal life, and are conducted to various places, and different societies, and some into cities, gardens, and beautiful plantations, and more particularly to see magnificent buildings, as such external objects suit with the present external state of their minds. Then they are led to inspect those interior sentiments and ideas, which they had in this life concerning the state of souls after death, and concerning heaven and hell, not without indignation to think of their own past ignorance, and also that of the church in relation to these important subjects. Almost all in the world of spirits are desirous to know, whether they shall go to heaven or not, and the greater part judge in favour of themselves as to this particular, especially such as had lived by the external rules of morality and civil obligation here; not considering that both good and bad do the same to outward appearance, as also do many good offices to others, and in like manner go to church, hear sermons, and bear a part in the public worship; not reflecting that these external acts,

acts, and this outward form of worship, avail nothing in themselves, considered separately from the disposition and principle of the worshipper, and that it is the interior or inner man that stamps the character and value upon the outward work and form; but scarcely one in a thousand knows what is meant by the interior, and even after being taught it place all in the words and bodily service; and such is the greater part of those, who at this day pass from the christian world into the other.

The second state of man after death is called his interior state, as he then passes into the more recondite things of his mind, or of his will and thoughts, whilst the more external functions of it, as exercised in his first state, are then quiescent or dormant. Whoever carefully attends to the lives, words, and actions of men, may soon find that every one has both his exterior and interior thoughts and intentions; thus for example, the man of civil connections and manners forms his judgment of others by what he knows of them by character and conversation; and though he should find them to be far otherwise than men of probity and worth, yet he does not speak and behave to them according to his real sentiments of them, but with something of seeming respect and civility: and this is still more strongly exemplified in the behaviour of persons addicted to dissimulation and flattery, who speak and act quite contrary to what they think and mean; and also in hypocrites, who can talk of God, of heaven, and spiritual things; and also of their country, and neighbour, as if from faith and love, when at the same time they have neither the one nor the other, and love none but themselves. This evinces that there are thoughts in the same mind of two different complexions, the one interior, and the other exterior, and that it is common for men to speak from the latter, whilst their real sentiments in the interior are contrary thereto; and that these two arrangements of thoughts are of distinct and separate apartments in the mind, appears from the pains such persons take to prevent those that are interior from flowing into the exterior to manifestation. Now man was so formed by his original creation, that both these were as one by correspondence and consent, as is the case now with the good, who both think and speak what is good and true; whereas in the evil the interior and the exterior are divided, for they think evil, and speak good, thus inverting the order of things, whilst the evil is innermost, and the good outermost, the former exercising rule over the latter, and using it's services for temporal and selfish ends, so that the seeming good which they say and do is corrupted and changed into evil, however the undiscerning may be deceived by it's outward appearance. On the other hand, they who are in the good principle stand in the divine order of God's creation, whilst the good in their interior flows into the exterior

exterior of their minds, and thence into their words and actions. This is the state in which man was created, and thus they have communication with heaven, and have the Lord for their leader. Thus much may serve to shew, that man thinks from two distinct grounds, the one called the interior, the other the exterior; and when we speak here of his thinking, we include likewise his faculty of willing, as his thoughts are from his will, neither can they exist separately.

After that man, now become a spirit, has gone through his first state, which is that of his exterior thoughts and will, he then passes into his second or interior state, and this he enters upon insensibly, which resembles that of a man in this world, who, finding himself at liberty from every restraint and dissipation, recollects himself, and enters into the most secret recesses of his soul. Now in this state of introversion, when he thinks freely from his inmost disposition and affections, he is properly himself, or in his true life. All without exception enter into this state in the other world, as proper to spirit, for the former is assumed and practised in accommodation to society and transactions in this world; and therefore, though it remains with man for some time after death, yet it is not long continued in, as not being suitable to the nature of a spirit, for the following reasons: First, because a spirit thinks and speaks from the governing principle of life without disguise; nay, the same is the case of man in this world, when he enters into his inmost self, and takes an intuitive view of his inward man, in which kind of survey he sees more in a minute than he could utter in an hour. Secondly, because in his conversation and dealings in this world, he speaks and acts under the restraint of those rules which society has established for the maintenance of civility and decorum. Thirdly, because man, when he enters into the interior recesses of his spirit, exercises rule over his outward oeconomy, prescribing laws thereto, how to speak and act in order to conciliate the good will and favour of others, and that by a constrained external behaviour. These considerations may serve to shew, that this interior state of liberty is not only the proper state of the spirit of a man after death, but even in this life. When a spirit has passed into this second or interior state, it then appears outwardly what manner of man he had been in this world as he now acts from his proper self; thus, if he had been a wise and good man before, he now manifests still higher degrees of rationality and wisdom in his words and actions, as being freed from those corporeal and earthly embarrassments which had fettered and obscured the inward operations of his mind, whereas the bad man evidences greater folly than before, for whilst in this world he fashioned his external behaviour by the rules of prudence, in order to save appearances; but not being under the like restraints now, he gives full scope to his insanity.

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All who in this world lived uprightly, and preserved a good conscience, walking in the fear of God, and in the love of divine truths, applying the same to practical use, seem to themselves as men awaked out of sleep, and as having passed from darkness to light, when they first enter upon their second or interior state; for they think from the light of pure wisdom, and they do all things from the love of goodness; heaven influences their thoughts and affections, and they are in communication with angels. But the condition of the evil in this state, is according to his particular concupiscence. They who had been absorbed in self-love, so as not to attend to the good uses of their respective offices and functions, but discharged them only with a view to their own estimation and honour, appear more stupid than others; for in proportion to the degree of self-love in any one is his distance from heaven, and consequently from wisdom: but they, who to the evil of self-love had added crafty devices, and by means thereof advanced themselves to worldly honours, associate themselves to the worst of spirits, and addict themselves to the magical arts, which are profane abuses of the divine order, by means of which they molest and vex all that pay them not honour; the practising of insidious wiles, and to kindle strife and hatred, yield them the highest pleasure; they burn with revenge, and long for nothing more than to tyrannize over all that submit not to their will; and all these wicked passions they gratify as far as their evil associates give them assistance; nay, so far does madness hurry them on, as to make them wish to scale heaven, either to subvert the government of the holy kingdom, or to cause themselves to be worshipped for gods therein. As to those who in this world ascribed all creation to nature, and so in effect denied a God, and consequently all divine truths, such herd together in this state, calling every one a god who excelled in subtlety of reasoning, and giving him divine honour. Such in the world of spirits are seen in their conventicle worshipping a magician, holding conferences concerning nature, and behaving more like brute beasts than human creatures, and among them some who were dignitaries in this world, and had the reputation of being learned and wise, and others of a different character. From thus much we may gather what they are, the interior of whose minds is shut against divine things, as their's is, who receive no influx from heaven through looking up to God, and a life of faith.

The third state of man, or of his spirit, after death, is the state of instruction, which is appointed for those that go to heaven, and become angels; but not for those that go to hell, as such are not in a capacity of instruction, and therefore their second state is their last, and answers to the third in others, as it terminates in their total change into that prevailing love which constitutes their proper principle, and consequently

into a conformity to that infernal society with which they have fellowship. When this is accomplished, their will and thoughts flow spontaneously from their predominant love, which being infernal, they can only chuse the evil and false, and reject all that apparent good and truth which before they had adopted, solely as means subservient to the gratification of their ruling passion. On the other hand, the good spirits are introduced from their second into their third state, which is that of preparation for heaven by the means of instruction; for none can be qualified for heaven but through the knowledges of spiritual good and truth, and their opposites, evil and false, which can only come from previous instruction. As to good and truth in a civil and moral sense, commonly called justice and sincerity, these may be learned from the laws of nations, and from conversation in virtuous company; but spiritual good and truth, as ingrafted principles in the heart, are only received by the teachings of a divine light: for though they are literally set forth in the scripture, and the doctrines of the christian churches founded thereon, yet they only gain the efficacy of a vital principle from a celestial influence manifesting itself in a conscientious obedience to the divine laws, as promulgated in the written Word, and that in respect to the divine authority of them, and not from selfish and worldly motives; then a man is in the heavenly life, or in heaven, even whilst in this world.

The way of conveying instruction in the other world differs from that on earth, inasmuch as truths there are committed, not to the memory, but to the life; for the memory of spirits is in their life's principle, and they receive and imbibe only what is conformable thereto, for spirits are so many human forms of their own affections. As the nature of spirits is such, therefore they are continually inspired with an affection for truth for the uses of life; for the Lord has so ordered it, that every one should love the uses that accord with their particular gifts and qualities; which love is likewise heightened by the hope of their becoming angels; for in heaven all particular and singular uses have relation to the general use or good of the Lord's kingdom, and may be considered as so many parts of one whole, so that the truths which they learn are both truths and the uses of truths conjunctly: thus the angelical spirits are prepared for heaven. The affection or love of truth for the purposes of use is insinuated into them many ways not known in this world, more particularly by various representations of use under such delightful forms as affect both their minds and senses with unspeakable pleasure, so that when any spirit is joined to the society for which he was prepared, he then enjoys life most when he is in the exercise of it's proper uses. Hence it may appear, that not the ideal knowledge of truths, as things without us, but an im-
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plantation of them in the affections and life for the purpose of uses, is that which qualifies for the kingdom of Heaven.

After that the angels are duly prepared for heaven in manner described, which comes to pass in a short time, as spiritual minds are of quick comprehension, they are then clothed in angelical garments, which, for the most part, are white as of fine linen, and conducted to the way which leads up to heaven, and delivered to the guardian angels there: after which they are received by other angels, and introduced to different societies, where they partake of various delights: after this every one is led by the Lord's guidance to his particular proper society, and this by various ways, sometimes direct, sometimes otherwise, not known to any of the angels, but to the Lord only. Lastly, when they are come to their own society, their inmost thoughts and affections open and expand themselves, which meeting with the like returns of cordial sympathy from their fellow-angels, they are immediately known and received by them with a joyful welcome.

An equilibrium is necessary to the existence and subsistence of all things, and consists in the equality of action and re-action between two opposite powers, producing rest or equilibrium; and this according to an established law through the natural world, observed in the very atmospheres, in which the lower and denser air re-acts on the superincumbent columns; nay, even betwixt heat and cold, light and darkness, dry and moist; and the middle point is the temperature or equilibrium. The same law obtains throughout the three great kingdoms of this world, the mineral, vegetable, and animal; wherein all things proceed and are regulated according to action and re-action, or actives and passives, producing or restoring an equilibrium in nature. In the physical world, the agent and re-agent are called power and conatus; and in the spiritual world, life and will, as being living power and conatus; and here the equilibrium is called liberty. Thus there exists a spiritual equilibrium or liberty betwixt good and evil, by the action of one, and the re-action of the other; for example, in good men this equilibrium is effected by the action of the good principle, and the re-action of the evil principle; but in bad men, evil is the agent, and good is but the re-agent. That there is a spiritual equilibrium betwixt good and evil, is because every thing appertaining to the vital principle in man, has relation to good or evil, and the will is the receptacle of both. There is likewise an equilibrium betwixt true and false; but this depends on the equilibrium betwixt good and evil, according to their kinds respectively. The equilibrium betwixt truth and false is similar to that which is betwixt light and darkness (*umbram*), which

which operates, according to the heat and cold therein, on the subjects of the vegetable kingdom; for that light and darkness have no such operation in themselves alone, but only through the heat in them, may appear from the similarity that is betwixt the light and darkness in winter and in spring. The comparison of truth and false with light and darkness is from correspondency, for truth corresponds to light, and false to darkness, and heat to the good of love. Spiritual light also is the same with truth; and spiritual darkness is the same with false.

There is a perpetual equilibrium betwixt heaven and hell; from the latter continually exhales and ascends a conatus of doing evil; and from the former continually emanates and descends a conatus (tendency to or will) of doing good. In this equilibrium is the world of spirits, which is situated in the midst betwixt heaven and hell; and this may appear from hence, that every man immediately after death enters into the world of spirits, and there continues in the same state in which he died; is examined and proved thereby, as a touchstone of his principles; and remains under the same free will, which all indicate an equilibrium; for such a spiritual equilibrium there is in every man and spirit, as observed before. The particular kind and tendency of this liberty or free will, is well known by the angels in heaven, by the communication of thoughts and affections; and it appears visibly to the angelical spirits, by the paths and ways which they chuse to walk in, as the good spirits take those which lead to heaven, and the evil spirits those which lead to hell; for such ways and walks have actually a visible appearance in that world; and this is the reason that the word *way* or *ways* in scripture signifies those truths which lead to good and in an opposite sense, those fables which lead to evil; and hence also it is, that to go, walk, or journey, signify the progressions of life in the same sacred writings.

That evil continually exhales and ascends from hell, and that good continually flows and descends from heaven, is because every one is surrounded by a spiritual sphere, flowing or transpiring from his vital affections and thoughts, and consequently the same from every society celestial or infernal, and collectively from the whole heaven and the whole hell. This universal efflux of good from heaven originates in the Lord, and passes through the angels without any mixture of their propriety or selfhood; for this is suppressed in them by the Lord, who grants them to live in his own divine property; whereas the infernal spirits are in their property of selfish nature, or what only belongs to themselves, which, as unblest with divine communications from the sole fountain of all good, is only evil in every one continually.

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The heavens, in the general, are distinguished into two kingdoms; the one of which is called the celestial, the other the spiritual kingdom. The hells likewise are distinguished into two kingdoms; the one of which is opposite to the celestial, the other to the spiritual. That which is opposite to the celestial is in the west, and they who belong to it are called Genii; and that which is opposite to the spiritual kingdom is in the north and south, and they who belong to it are called evil spirits. All in the celestial kingdom excel in love to the Lord, and all that are in the hells opposite to that kingdom, are under the prevailing power of self-love; all that belong to the spiritual kingdom are distinguished in excellence by love to their neighbour, and all that are in the hells opposite to this kingdom, are slaves to the love of the world; so that love to the Lord, and the love of self, are in the same diametrical opposition to each other, as the love of our neighbour and the love of the world. Effectual provision is made by the Lord, that no power of evil from the hells, that are in opposition to the celestial kingdom, may reach the subjects of the spiritual kingdom, as the consequence in that case would be the subversion of the latter. Thus does the Lord keep the balance betwixt good and evil in his own hand for the preservation of his kingdoms.

As good and evil, truth and false, are of a spiritual nature, so also is that equilibrium in which consists the power of thinking and willing the one or the other, and the liberty of chusing or refusing accordingly. This liberty, or freedom of the will, originates in the divine nature, but is given to every man by the Lord for a property of his life, nor does he ever take it back again. This good gift to man is to the end that he may be regenerated and saved, for without free will there is no salvation for him; but that he actually possesses it, he may know from the operations of his own mind, and what passes inwardly in his spirit, he being able to think and chuse either good or evil, whatever restraints he may be under from uttering or acting the latter in respect to laws divine or human. Now this inward experience evinces beyond a thousand arguments, that liberty belongs to man, as his spirit is his proper self, and it is that which freely thinks, wills, and chuses; consequently, liberty is to be estimated according to the inner man, and not from what he may be outwardly through fear, human respects, or other external restraints.

That man would not be capable of being reformed or regenerated without free will, is because he is by the original constitution of his nature born to evils of every kind, which must be removed in order to his salvation; and that can only be by his knowing, owning, renouncing, and abhorring them. To this end, he must be instructed in the nature of

good ; for it is by good only that he can see the evil, but by evil he cannot see the good : accordingly, he must be early educated in the knowledge of spiritual truths by teaching, by reading the scriptures, and by the preaching of the Word, that so he may attain to a right understanding of what is good ; as he is likewise to cultivate his mind with the knowledge of moral and civil truths from his intercourse with society in the different relations of life ; all which imply the use and exercise of freedom. Another thing to be considered is, that nothing becomes appropriated to man, or can be called his own, that is not received into the affectionate part ; other things he may apprehend or form an ideal knowledge of, but what enters not his will or love, which is the same thing, (for what a man wills he loves) that makes no part of him, nor abides with him. Now man being naturally prone to evil, he could not receive its contrary, the good, into his will or love, so as to become appropriated to him, unless he were endowed with liberty or freedom of will, seeing that the good is opposite to the evil of his nature.

As man is possessed of liberty or free will, in order to be capable of regeneration, therefore he can have communication in spirit with heaven, or with hell ; for evil spirits from the one, and angels from the other, are present with him ; by the former he possesses his own evil ; by the latter he is in the principle of good from the Lord ; and herein stands his equilibrium or liberty. Not that this conjunction of man with heaven or hell is an immediate conjunction, but mediate only, and that through the spirits that belong to the world of spirits ; for these are the spirits that attend on man, and not any immediately from heaven or hell *. By the evil spirits belonging to the world of spirits, man joins himself to hell ; and by the good spirits of the same world he has communication with heaven ; for the world of spirits is intermediate between heaven and hell, and constitutes the true equilibrium. Let it be observed, as touching those spirits that are appointed to be man's associates here, that a whole society may hold communication with another society, and also with any individual wheresoever, by means of an emissary spirit, which spirit is called, *The subject of many*. The case is similar with respect to man's communication with the societies in heaven and in hell, by the intervention of his associate spirit from the world of spirits.

* As the good spirits belonging to the world of spirits, being in their final preparation for the angelical state, are called angelical spirits ; and as they have immediate communication with the heavenly angels, so has man, through them, a mediate communication with the same. On the other hand, the bad spirits, belonging to the world of spirits, being in their final preparation for hell, are called infernal spirits, and have immediate communication with devils ; and wicked men, through them, a mediate communication with the same. Thus all communications between man, and the highest and lowest in heaven and hell, are conducted through mediums adapted to his nature and states respectively.

What has been delivered concerning heaven, the world of spirits, and hell, will appear obscure to those who have no relish for spiritual truths, but clear to such as take delight therein, more especially to all who are in the love of truth for it's own sake. What we love, we readily receive and understand; and where truth is the object of our affections, it recommends itself to the mind by the evidence it brings with it; for truth is the light, by which all things are known and distinguished.

Such is the opinion of Baron Emanuel Swedenbourg, with respect to the spirits and departed souls of men. But the *Magi*, or wisemen of the east, have defined spirits, good and bad, of a great variety of kinds and orders, whereof some are suited to the purposes of witchcraft and exorcism, and others not. The form and nature of spirits, say they, are to be considered according to the source to which each *caterua* doth belong; for some, being altogether of a divine and celestial nature, are not subject to the abominable conjurations and enchantments of vicious men; whilst others, of a diabolical and infernal nature, are not only ready upon all occasions to become subservient to exorcists and magicians, but are ever watching opportunities of exciting evil affections in the mind, and of stirring up the wickedly inclined to the commission of every species of iniquity and vice. As to the shapes and various likenesses of these wicked spirits or devils, it is generally believed, that according to their different capacities in wickedness, so their shapes are answerable after a magical manner, resembling spiritually some horrid and ugly monsters as their conspiracies against the power of God were high and monstrous, when they fell from heaven. For the condition of some of them is nothing but continual horror and despair, whilst others triumph in fiery might and pomp, attempting to pluck the Almighty from his throne; but the quality of heaven is shut from them, and they can never reach it, which acts upon them as an eternal source of torment and misery. But that they are *materially* vexed and scorched in flames of fire, is only a figurative idea, adapted to our external sense, and by no means to be literally understood; for their substance is spiritual, and their essence too subtil for any external torment. Their misery is unquestionably great and infinite; but not through the effect of outward flames; for their bodies are capable of piercing through wood and iron, stone, and all terrestrial things. Neither is all the fire or fuel of this world able to torment them; for in a moment they can pierce it through and through. The endless source of their misery is in themselves, and stands continually before them, so that they can never enjoy any rest, being absent from the presence of God; which torment is greater to them, than all the tortures of this world combined together.

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The wicked souls that are departed this life, are also capable of appearing again; and of answering the conjurations and magical questions of exorcists, because the quality of their minds, and the bent of their inclinations, being similar to those of the fallen angels or devils, it cannot be conceived that their torment and pursuits hereafter are much different; for the Scripture saith, *that every one is rewarded according to his works*; and, *that which a man sows, that he shall reap*. Hence it follows, that as the damned spirits of departed men, while they lived on earth, heaped up vanity, and loaded their souls with iniquity and vice; so when they enter the next world, the same abominations which here they committed, serve them to ruminate and feed upon, and the greater these offences have been, the greater is the torment arising from them every moment. But very contrary to this, is the state of the righteous souls departed, who are entered into eternal rest; and of the different degrees and orders of the angelic host, which appertain to heaven, and have places in the mansions of the blessed. Nor is it possible for any one, how expert soever in magical experiments, to compel these blessed spirits, of any degree, order, or quality of creation, to be exorcised, or called up, or made appear, *at the will of the Magician*, by any forms of convocation or communication, or by the power of magical rites and ceremonies of any class or description whatsoever. It may indeed be believed, and it is by most authors admitted, that infinite numbers of the angelic host are employed for the glory of God, in watching over and protecting the pursuits of good men; but they are not subject to spells or conjurations of any kind set on foot by the impious professors of the Black Art.

Of a different opinion, however, are some of those, who attempt to justify the magic art, under sanction of the holy scriptures, and for this purpose instance the supplication of Saul to the Witch of Endor. This passage undoubtedly serves to shew, how greatly the practice of exorcism reigned amongst the Jews, and proves the possibility of raising up spirits in those ancient times; but that the exorcist never meant to bring up the spirit or ghost of Samuel, but that of an evil dæmon to represent him, is apparent from her exclamations to Saul, when she accuses him of having deceived her; and is a convincing proof, that this particular instance of the similitude of a blessed spirit being called up by a professor of spells and incantations, was owing to the immediate permission of the Deity, for the purposes of forwarding the Jewish dispensation, and manifesting his peculiar regard to the person of David, through whose loins the Messiah was to come.

Such spirits as are termed *Astral spirits*, which belong to this outward world, and are compounded of the elemental quality, having their
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source from the stars, and being subject to a beginning and ending, may be solicited and brought into league with magicians and witches; and can also inform them of many wonderful and occult properties in nature, and of many important concerns relating to the state and affairs of men in this terrestrial world. This description of spirits is said to occupy various places of the earth; as woods, mountains, waters, air, fiery flames, clouds, stars, mines, sea-shores, ancient buildings and ruins, and places of the slain. They are capable of hunger, grief, passion, and vexation, being in some measure temporal, and compounded of the most spiritual part of the elements, into which they are eventually resolved, as ice into water; and have been more or less celebrated by historians and poets in all ages of the world.

There are likewise another species, called *Igneous* or *Fiery* Spirits, that inhabit the burning mountains of *Hecla*, *Vesuvius*, *Ætna*, *Poconzi*, &c. which some authors have affirmed to be *infernal* spirits, and damned souls, who, for a term of years, are confined to these burning mountains for their iniquities. But the most received opinion is, that they are of a middle vegetative nature, and perishable, which, at the dissolution of the *media natura*, shall be again reduced into their primary æther. And from natural causes it may be easily demonstrated, that there is great correspondence betwixt such substances, and the element of fire, by reason of the internal flagrat and central life proceeding from the quintessence of one only element, which upholds them in motion, life, and nourishment; as every natural and supernatural being is upheld and maintained out of the self-same root from whence it had its original. So the angels feed upon the celestial manna; the devils upon the fruits of hell, which is natural to the *propensity* of their appetites; the astral spirits upon the source of the stars, and the gas of the air; upon a principle that every thing is nourished by its mother, as infants at the breast, or chickens from the egg, &c. The proper nourishment of fiery spirits, however, is radical heat, and the influence of the airy region; nor is it to be wondered at that they are so much delighted with the fiery quality, in regard of their affinity and near approach to the essence and quality of infernal spirits or devils, whose state and being is altogether damnable and deplorable; for although they have not the ability of attaining either the heavenly or infernal quality, by reason that they are utterly void of the innermost centre, and may be rather termed monsters than rational animals, yet because they are compounded of the outermost principle, such is their innate affinity and unity with the dark world or infernal kingdom, that they often become the devil's agents, to propagate his works upon the face of the earth. Thus by the instigation of infernal spirits, and

their own promptitude, they often terrify men with nocturnal visions; provoke melancholy people to suicide; tempt drunkards and incendiaries to set houses on fire, to burn those who are in them, and allure careless servants and others to sound and incautious sleep, that such unlucky accidents might happen; besides innumerable other ways they have of executing the devices of iniquitous spirits through malicious instigations, or secret stratagems, projected for the overthrow and destruction of mortal men; especially when the work to be effected by the devil is too hard for his subtle and spiritual nature to effect, because the same belongs to the outward source or principle to which these dubious spirits more immediately belong. For being compounded of the fiery element, they are most officious in this kind of service, being such as the antecedent matter hath sufficiently demonstrated; but according to their different ranks and orders some of them are much more inveterate and malicious in their agency than the rest. These, as well as every other kind of astral spirits, are more or less obsequious to the kingdom of darkness; and the devil, it seems, can effect little or nothing without their assistance in this outward or elementary world, upon the passions of mankind; because their bodies are too crude for the direct conveyance of their influence, either in dreams, charms, visions, raptures, or other soft and alluring means. These fiery spirits are likewise apt for conjuration, and are always ready at the call of the magician, for the execution of any cruel or diabolical purpose.

Distinct from fiery spirits, are a species which properly belong to the metallic kingdom, abiding in mountains, caves, dens, deeps, hiatus or chasms of the earth, hovering over hidden gold, tombs, vaults, and sepulchres of the dead. These spirits are termed by the ancient philosophers "*protectors of hidden treasure*," from a principle or quality in their nature, whence they exceedingly delight in mines of gold and silver, and places of hidden treasure; but are violently inimical to man, and envy his benefit or accommodation in the discovery thereof; ever haunting those places where money is concealed, and retaining malevolent and poisonous influences to blast the lives and limbs of those who attempt to make such discoveries; and therefore extremely dangerous for magicians to exorcise or call them up. It is recorded in several of the ancient British authors, that *Peters*, the celebrated magician of Devonshire, together with his associates, having exorcised one of these malicious spirits to conduct them to a subterranean vault, where a considerable quantity of treasure was known to be hid, they had no sooner quitted the magic circle, than they were instantaneously crushed into atoms, as it were in the twinkling of an eye. And in this particular we have two many fatal examples upon

upon record, of the sudden destruction of those who by magical spells had called up this description of spirits, for the purpose of discovering hidden gold; which examples seem to prove, that these spirits have more affinity with the *infernal* than with the *astral* hierarchy; and that they are the diabolical agents of *Mammon*, bringing about all the evils of this world, which spring from an insatiable lust after gold; whence the saying in scripture, that “*we cannot serve God and Mammon,*” and that “*’tis easier for a camel to pass through the eye of a needle, than for a rich man to enter into the kingdom of heaven;*” hyperbolically spoken, in reference to the innumerable sins and wickedness committed by mankind, for the sake of temporary wealth and riches! Hence too a reason offers, why, of all other subordinate spirits, these are the most pernicious to mortal men. The nature of them is so violent, that in the histories of the gold and silver mines abroad, it is recorded that whole companies of labourers have been destroyed by them at once; and that their delight is in tormenting, killing, and crushing to death those who most greedily lust after and seek for such treasures. The richest and largest silver mine in Germany, was haunted by one of these spirits, who sometimes used to appear in the shape of an he-goat, with golden horns, pushing down the workmen with uncommon violence; and at others in the shape of a horse, breathing fiery flames and pestilential vapours at his nostrils, till by continual destruction, fear, and alarm, they were obliged to desist from working that mine any longer; and it continues shut to this day.

Thus far we have considered spirits *subordinate*, or such as properly belong to the elementary or outward world. We will now take a view of the infernal spirits or devils, and damned souls; which are to be classed according to their respective ranks and orders, exactly correspondent or apposite to the choirs and hierarchies of the angels, or blessed spirits in heaven.

The origin of devils and infernal spirits, as scripture, revelation hath confirmed and established, proceeded from conspiracy and rebellion in heaven, under the arch fiend *Lucifer*, who was originally of the highest order of the angelic host; because it is written of him, “*In Cherubim extentus protegeus posui te monte sancto, Dei*”—Extended upon a Cherubim and protecting, I have put thee in the holy mountain of God. And further, because it is also written, “*Quomodo enim mane oriebaris Lucifer*”—For then didst thou rise in the morning, O Lucifer. Various are the opinions as to the express occasion of his fall. Some say, it was for speaking these words: “*Ponem sedem meam in aquilone, similis ero altissimo*”

altissimo"—I will put my seat in the North, and I will be like the most High. Others affirm, that it proceeded from his *utterly refusing felicity, and holding the blessings of heaven in derision*. Some again, *because he asserted that all his strength proceeded from himself, and not from God*. Others, *because he attempted to effect that by himself and his own strength, which was alone the proper gift of God*. Other opinions say, *That his condemnation proceeded from his challenging the place of the Messiah*; whilst others insist, that it was because he *impiously challenged the omnipotency of God, with whom he claimed equal power*. But the Christian church in all countries agree, that it was for all these crimes put together, and many more; exclusive of his drawing aside the allegiance of other angels, and suborning the whole of his own legion in conspiracy, to attempt to pluck the Almighty from his Throne; whereupon a dreadful conflict ensued between Michael the archangel, with the heavenly host on one side, and Lucifer and his rebellious tribes on the other, which ended in their total extermination from the mansions and light of heaven, to suffer eternal torment in the dark abodes of the infernal regions.

Here began the kingdom of darkness, and the devil's enmity to mortal man; who being created of a nature inferior to the angels, but, by a state of probation, capable of arriving to the same degree of excellence, and of filling up the vacancy in heaven, occasioned by the fall of Lucifer and his legions, it excited his envy still the more, and laid the ground of that ceaseless warfare, which, from the fall of Adam, to the present hour, hath existed between the king of darkness, and the souls of men. And though this conflict is not conducted by outward and visible means, yet it is effected by secret snares and ambuscades, which take us at unawares, and when we are most off our guard. For the Devil, while we feed, allures us to sin by gluttony; he thrusteth lust into our generation, and sloth into our exercise; into our conversation, envy; into our traffic, avarice; into our correction, wrath; into our government, pride; he putteth into our hearts evil cogitations; and into our mouths, lies. When we awake, he moveth us to evil works; when we sleep, to evil and filthy dreams; he provokes the jocund to lasciviousness, and the sad to despair; whence spring the various evils with which frail human nature is surrounded; and which nothing, but a full confidence in heaven, and the gospel dispensation, can alleviate or remove.

But as to the locality or circumscription of the kingdom of darkness, it is far otherwise to be considered than the common and vulgar idea of it, which esteems the infernal habitation as a distinct chasm or gulph in a certain place, either above, under, or in the centre of the earth, where
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innumerable devils and wicked souls inhabit, and are perpetually scorched and tormented with *material* flames of fire. This is the opinion which the vulgar are naturally addicted and prone to believe. But if we rightly consider the kingdoms of heaven and hell, in respect of each other, we must look upon the similitude of *light* and *darkness* in this outward world, which is not circumscribed, nor separate, as to locality, from one another; for when the Sun rises, the darkness of the night disappears; not that it removes itself to some other place or country, but the brightness of the light overpowers and swallows it up, so that though it disappears, yet it is as absolutely there as the light itself. The same similitude is also to be considered in the description of the habitations of good and evil beings, that they are really in one another, yet not comprehended of one another; neither indeed can they be, for the evil spirits, though they should remove ten thousand miles, yet are they in the same quality and source, never able to find out or discover where the kingdom of heaven is, though it be really through and through with the dark kingdom; but in another opposite quality, which separates and makes them eternal strangers to each other. A similitude hereof we have in the faculties of human life, considered with respect to the endowments of the soul in the just, and in the wicked; for to be good, pure, and holy, is really present as a quality in *potentia* with the depraved soul, although at that instant the soul be cloathed with abominations, so that the eye which should behold God or goodness, is put out. Yet if the soul would but come out of itself and enter into another source or principle, it might come to see the kingdom of heaven within itself, according to the Scripture and Moses, "*the word is nigh thee, in thy heart, and in thy mouth.*"

True it is, that the devils, or fallen angels, cannot all alike manifest themselves in this astral world; because the nature of some of them approaches nearer to the external quality than others; so that although *properly* the very innermost and outermost darkness be their proximate abode, yet they frequently flourish, live, move, and germinate in the airy region. But, according to their fiery nature, it is very difficult for them to appear in this outward world, because there is a whole principle or gulph betwixt them, namely, they are shut up in another quality or existence, so that they can with greater difficulty find out the being of this world, or come with full presence into it, than we can remove into the kingdom of heaven or hell, with our intellectual man. For if it were otherwise, and the devils had power to appear unto mortals as they list, how many towns, cities, &c. would be destroyed, and burnt to the ground! how many infants would be pluckt away in their innocency, and unoffending creatures be destroyed by their malicious power? Indeed

few or none would escape with their lives, or possessions, or sound minds; whereas now all these enjoyments are free amongst mankind; which proves, that it is extremely hard for infernal spirits to appear in the third principle of this world; and as difficult as for a man to live under water, or fishes on the shore. Yet we must grant, that when the imaginations and earnest desires of the wicked have stirred up the centre of hell within themselves, that then the devil hath access to this world in their desires, and continues here to vex and torment them, so long as the strength of those desires remain, which was the first attractive cause.

The cause of the paucity of appearances of evil spirits in these days, is the fulness of time, and the brightness of Christianity, dispelling the mists of heresy and idolatry, as the Sun doth the fogs, which vanish on its appearance; not by any violence or compulsion, but from a cause implanted in the nature of things and their opposites. Even so the kingdom of light, as it overspreads the soul in power and dominion, closes up the centre of darkness, and scatters the influences of the devil before it, who becomes as it were entirely *passive* as to the works and will of man. In the time of the law, when the wrath and jealousy of the Father had the dominion in the kingdom of nature, infernal spirits had more easy access to mankind than they now have; for before the incarnation of Christ, the anger of God was unappeased, and had more dominion over the soul of man, which was then at greater distance from the divine goodness; consequently the devils could with more facility spring up in the element of wrath, and manifest themselves in this outward principle; because the very idea and basis of hell, is founded on the wrath of God, which is the only channel by which the devil is conveyed into this world. So when the miracles of Christ began to manifest themselves in the world, the multiplicity of diabolical appearances, and possessed with the devil, began insensibly to decay and vanish. It is true, that the greatest instances known of the temptations and power of Satan, were exercised in that space of time betwixt the incarnation and crucifixion of our Saviour, yet it is as certain, that the devil knew he had but a short time longer to uphold his kingdom here, and therefore he employed all his strength and forces to torment those captive and miserable souls, to whom Christ came to preach deliverance. But after the partition wall was broken down, and the vail of Moses, and the wrath of God, were removed, there was a sensible and visible decay of Satan's power in the world; so that, though it be possible, even in these days, by a renunciation of the salvation of Christ, and by becoming a disciple of the devil, to hold correspondence with, or to be wholly possessed by him; yet these things happen so rare, and
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require so depraved a state of mind and conduct, that whenever they are pretended so to be, there is great room to doubt the truth of such assertions, though *apparently* well authenticated.

But notwithstanding that the coming of Christ hath thus curtailed the power of the devil over all christian countries, yet such nations as hath never embraced the christian faith, but pursue the ancient superstition and idolatry, are still deluded and bewitched by him, because the centre of truth and light never having been awakened in them, the power of Satan easily prevails to seduce them to worship things visible, instead of the true God: for where most darkness and superstition is found, whether in religion or personal understanding, there his power is always most predominant. Thus it is now with the miserable inhabitants of the greatest part of Asia, and the uncultivated and ferocious parts of Africa and America; yet we have hopes that the goodness of Providence, in his own fit and appointed season, will, through some favourable channel, communicate the light of the gospel to those miserable beings, whereby the shocking idea of feeding on human flesh,—of devoting one another to destruction and slavery, and of pursuing the insinuations and works of the devil, may be totally abolished, and every part of the habitable globe be united in the acknowledgment of one God, of one Saviour, and of one liberal, candid, and impartial christian persuasion.

As to the different shapes and forms of the devils, it is suggested by scripture, and admitted by all writers upon the subject, that they were answerable in monstrosity and hideousness to the superior rank they held in heaven, and to the enormity of the offence which was the cause of their fall. Thus in Revelation, Lucifer, as the leader and prime apostate, is termed the *great Dragon*, and king of the devils. And hence it is conceived, that those who belonged to the supreme hierarchies in heaven, and were the foremost to rebel, were immediately on their expulsion from the realms of bliss, transformed from angels of splendour and glory, to devils in the shape of dragons, crocodiles, serpents, tygers, and the like; so that the most perverse and potent among the devils, possess the most ugly and frightful of the bestial shapes, but a thousand times more terrific and frightful than can possibly be conceived from the most ferocious of those animals. In this consideration, however, there is a material distinction to be made between the apostate angels and the damned souls, which have deserted God in this world, and become inhabitants of the infernal regions in the other. For the most part, these unhappy creatures retain the human shape, but with aspects dismal and melancholy, and expressive of the unspeakable torments they are doomed to suffer; for
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in themselves they rest not, neither are they capable of the shortness or duration of time, nor of the alternate courses of day and night. The sins and wickedness they committed in this life is the source of their continual torment, which gnaws and corrodes them, rising and boiling up continually in their minds, without rest or intermission. All the refrigeration they have, is by intercourse with the devils, when the height of wickedness stirs them up to blasphemies against God, and towering up above heaven and omnipotence in their adulterated and deluded imaginations, which, figuratively speaking, serves as sport and pastime amongst one another, but of a short and certain duration. Not that this is of the smallest advantage, or the least mitigation of their torments; for pain discontinued returns the greater; neither would vexation be vexation, if it had no respite nor forbearance that the contrary might be also manifest, *nam contraria juxta se posita majus elucescunt*. Yet is their torment exceedingly different; so that the suffering of one in respect to that of another is but a mere dream or phantasy.—I mean, amongst the damned souls, and not the devils; for the pain and torment of the devils is greater than the greatest of the lost souls by many million degrees, according to the course of nature and reason; for that which falls highest suffers most, and *optima corrupta fiunt pessima*.

But wonderful and manifest are the torments which lost souls endure, according to the various lusts and licentiousness they indulged in whilst they lived upon earth, or died in without expiation or repentance. The cruel murderers, who died in the boiling source of blood and envy, suffer the greatest torment, because they are continually murdering in their imaginations, and seeking, like dreaming men, to effect what the want of the correspondent organ will not permit them to do. For according to scripture, and the wisest authors upon this subject, the principal torment and misery of damned souls, proceeds from their continually wishing and woulding; whence they generate ideas and representations, founded in impossibility, which is the source of their continual aggravation, disappointment and misery. By the same reasoning, those who died in lust and gluttony, lasciviousness and inebriety, are overwhelmed with correspondent torments, though much inferior to the first. They are continually imagining their former pleasures in the *magia* as in a dream, which, when they awake, torments them cruelly; as with us, when we awake from a frightful dream, and find it is only a dream, our pleasure is more susceptible—whereas with them, the case is reversed; for as their time is spent in eternal torment, so their dreams of bliss, when they awake, or become more sensible to their misery, but aggravates their misfortunes, and gives fresh poignancy to the torments they endure.

endure. Such souls in whom the boiling source of anger and revenge hath had a dwelling or receptacle here, if they depart this life in their sins, do likewise endure a most dreadful kind of torment, which arises continually as a biting worm and hungry fire, to double and accumulate an excess of despair upon them. Those also who reigned in pride and ostentation upon earth, treading under foot the meek and humble in heart, are tortured with the utmost reverse of their desires, which are ever uppermost in their infatuated imaginations. They are ever seeking to pull the Almighty from his throne, and towering up in the pride of their hearts, hoping to gain the kingdom of heaven to insult and boast in. But the quality of the beatific source is utterly occult and estranged from them, so that they can never find, taste, hear, nor see it, though it be wrapt round and round with their own peculiar source and principle. This adds eternally to their misery, and rises upon their senses with horrible pangs and bitter gnawings, like the irksome and vexatious pains and aches of man's body, only a thousand times more acute and insupportable. The nature also of their habitation is such, that their punishment is exceedingly aggravated that way; because the extremity of the four elements is there converted into a whole principle of wrath and torment. The excess of cold and heat, drought and moisture, are alternately raging amongst them by intercourse; nor is there any light or lustre within their courts, but that which is emitted from their fiery eyes, or flaming nostrils, as a deadly glance or glimmering, which serves only to render the momentary glance of their miserable habitation ten times more disgusting and intolerable. And as every kind of being feeds upon something proper to its own nature or element, whether it be plant, animal, or metallic production, so the devils are neither destitute of meat nor drink, according to their own kingdom and quality, having fruits springing up and growing before them, of hellish, sour, and poisonous natures, which are real and palpable to them, and not imaginary or typical, though to us magical and invisible. Neither is this at all to be wondered at, if we consider the nature of man's soul *in media natura*; for if it feed not upon the internal and substantial Word, which is the very head of life itself, it must and will of necessity ruminate on something else, viz. the fruits of iniquity; which it takes in and swallows up, even as an ox drinks the water; so that to the soul the sin becomes palpable, glutting, and satiating, from which it never can be freed, but by works of expiation and repentance. Also, in the astral source, when called up by magical spells and incantations, or otherwise, they are not destitute of food, but receive the influences of the air and water into their *limbus*, which they convert into food, according to their own poisonous quality; as of sweet and wholesome herbs, the filthy toads and other venomous reptiles form their poison, converting them into a nature

like their own. And so likewise these infernal spirits, considered in respect of the four elements, have a tone or language peculiar to themselves, which they exercise and speak one amongst another, as mortals do ; but they have utterly lost the dignity of their sounds according to the eternal nature, and are totally corrupted in their pronunciation or dialect, since they fell from their first celestial glory ; so that their articulation is harsh, doleful, fierce, and terrible, like the fruits they feed upon, and place they dwell in. This deprivation is very apparent in the kingdom of this world, in the divided languages of every region, according to the constellation under which they are situated ; the true and magical language of nature, notwithstanding the industrious Lexicographers, still remaining hidden from the knowledge of every country in the habitable world.

Thus far I have endeavoured to illustrate the causes, natures, and punishments of infernal spirits ; which, notwithstanding, is a subject so intricate and copious in itself, by reason of the variety of their qualities in the source of darkness, wherein they live, move, eat, breathe, and inhabit, having qualities, actions, and passions innumerable, and which are to mankind almost utterly unknown and incomprehensible. So that to attempt an ample demonstration of the matter, would require deeper speculation than the subject deserves, or that I am master of ; particularly as the inhabitants of that gloomy kingdom are never in one regular stay, continuance, or property, but from one hour to another are continually floating and changing ; like the swiftness of the winds, or the gliding along of running waters, which pass away as a thought, and are no more remembered. So it is with the devils and damned spirits in that lachrymable state of darkness, where their existence is a continual anguish and torment, shifting from the pangs of one sorrow to the bitterness of another, unto all eternity !

Now according to the spirit of Christian Revelation, there hath been always opposed to the machinations of the devil and his imps upon earth, who “ *go about like roaring lions seeking whom they may devour,*” a certain description of good and holy spirits, whose province it is to watch over the affairs of men, and to guard them from the invisible assaults of the devil ; exclusive of the ministration of God’s holy angels, which hath been manifested in a thousand different instances in scripture ; but whose appearances and manifestations to the eyes of mortal man, never has been, nor can be permitted, but on the most important dispensations of divine Providence. The received opinion however is, as to the former doctrine, that there is according to the disposition of the mind or soul, a good or evil *Genius*, that accompanies invisibly every person.

son born into the world. Their office is principally that of forewarning the persons they attend of any imminent impending danger, sometimes by inward instinct, or by outward appearances; and sometimes by dreams in the night. These *Genii* change their quality and office as the person or party change their's; if from good we degenerate to evil, then by degrees the good *Genius* is estranged from us, and an evil Demon naturally succeeds, according to that sympathy of things, wherein each draws after it that which is its like. There have been likewise defined, by the learned Doctors and Rabbi's who have written on this intricate subject, *seven good angels*, who watch over and superintend the general affairs of mankind, and who are ever ready to forward, by intellectual association, mental instigation, or strong nocturnal visionary manifestation, the general prosperity and success of all mens affairs, who are governed by the laws of integrity and religion, and who are, by some one or other of these means, allured or prompted to such particular conduct or determination, as shall tend ultimately to their honour and preferment, to the good of society, and to the glory of God and true religion, which is the grand office of these seven good spirits to promote. And opposed to these are *seven evil Spirits or Demons* proper to the infernal world, whose office is to infuse evil into those men's minds who are naturally so addicted, and who never fail to join in association, though invisibly, with depraved persons of every description, whose passions they influence, and whose desires they lead to the commission of all the abominations of this world. The names of the seven good angels or spirits are, I. *Jubanladace*, distinguished in the dominion of thrones, as the appointed guardian of all public and national enterprizes, where the good of society, and the honour of God, are unitedly concerned. He is delineated in all the brightness of a celestial messenger, bearing a flaming sword, girded about the loins, with an helmet on his head; and this is the magical character by which he is distinguished, and which is worn by many as a lamen round the neck, for a preservative against putrid infection and sudden death.

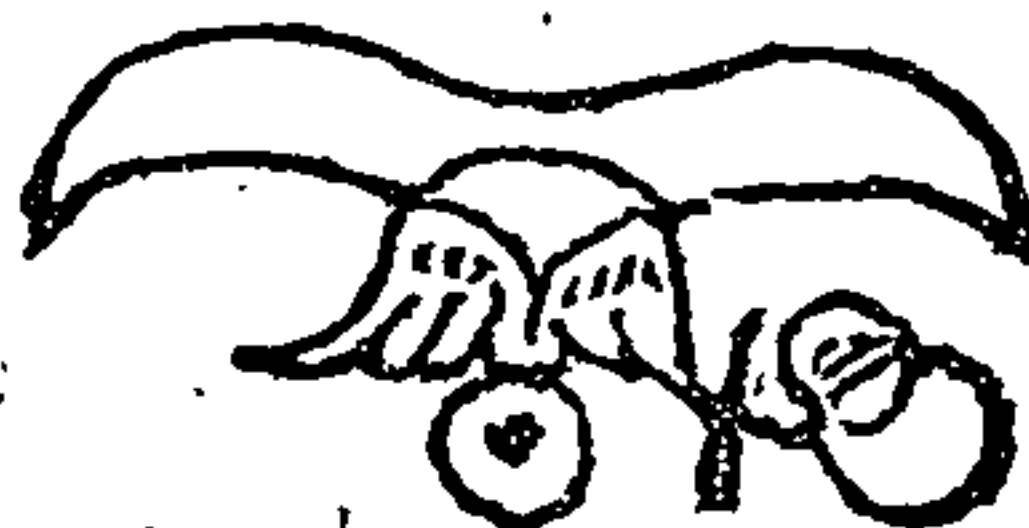


The second is *Pab-li-Pab*, one of the celestial powers, whose peculiar office it is to guard and forewarn such as are virgins and uncontaminated youth, against all the evils of debauchery and prostitution; and to elevate the mind to a love of virtue, honour, and revealed religion. He personifies the character of an illustrious angel, of a bright, but most complacent

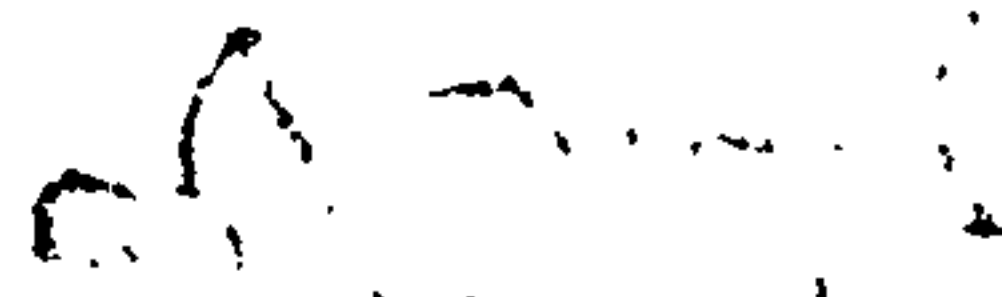
cent countenance; and is known by the following magical symbol, which is worn about the neck of virgins as a protection from all the assaults of *evil demons*, and is said to be infallible against the powers of seduction.



The third is *Nal-gab*, devoted to the protection of those who are assaulted by evil spirits or witches, and whose minds are sunk in fearful and melancholy apprehensions of the assaults of the Devil, and the power of death. His proper office is to fortify the mind, and to lead the senses to a contemplation of the attributes of God, and the joys of heaven, the reward of all good works. His appearance is represented as perfectly celestial, having a crown of gold upon his head, with a shield and spear in his hands, for the protection of those over whom he presides. The following is his magical character, which is worn round the neck as a preservation against witchcraft and suicide.



The fourth is *Maynom*, one of the Powers who hath the ability of subervient administration and protection; that is, at one and the same time to be present with many. His presence must be sought by humility and prayer. The fifth good Genius is *Gaonim*, an angel of celestial brightness, who hath the peculiar ability of rendering his pupil invisible to any evil spirits whatsoever, as often as attacked by them. The sixth is *Halanu*, the guardian and promoter of all good and great ideas, by whom *Bezaliab* and *Aboliab* were divinely inspired for the structure of the tabernacle. The seventh is *Ramah-umi*, the genius of geometrical proportion, and the power of numbers; the secrets and extent of which are not yet half known, even to the most favoured of those whose capacities are enlightened by his superior aid.



Now the office of the seven evil dæmons or spirits, is to counteract and destroy the effect of the good; for as the power and capacity of the good proceeds from the omnipotence of God in the quality of heaven, so is the force of the *evil Genii*, in the infernal quality, made correspondent thereto, from a principle of contraries; for it is to be noted, that these seven *evil* angels, before their fall, enjoyed the same places and degrees of glory, that now belong to the seven *good* angels or *Genii*; so that, as
their

their office is to instruct and allure mankind to the pursuit of every thing that is good, great, virtuous, and honourable, it is the business of the others, to tempt and seduce the mind to a pursuit of whatever is vile, vicious, and abominable, and that may be instrumental in extending the kingdom of darkness and the power of the devil. The names of these seven evil spirits or Genii stand upon record as follow; 1. *Panalcarp*, in the likeness of a crocodile with two heads. 2. *Baratron*, appearing like a magician in a solemn priestly habit. 3. *Sondennab*, in the caparison and similitude of an Indian huntsman. 4. *Greizmodal*, in the fawning shape of a large spaniel dog. 5. *Ballisargon*, in the similitude of a covetous miser, lusting after gold, he is the grand enticer to thieving and robbery, and usually brings his followers to an ignominious and destructive end. 6. *Morborgran*, who under various likenesses of a friendly serving man, induces the worst examples of hypocrisy and deceit—This dæmon, it is said, was the constant attendant of Judas Iscariot. The 7th. is *Barman*, ready to enter into league with any conjuror, witch, or wizard; but who most commonly possesses the soul of whomsoever he is in league with. These good and evil spirits, it seems, are the most easy to be invoked or called up, agreeable to the desires and situation of the magician's mind and inclination, because they are most near and familiar to the actions and pursuits of men, and officially attendant upon them.

Different from every species of all the foregoing orders of spirits, are the ghosts and apparitions of deceased persons, which have been known for many years to survive and continue; particularly where the deceased person hath departed this life in discontent, melancholy, or unquiet mind; for in these cases they have been often known to return again, and without a desire of causing terror and alarm to houses and families, seek only for an opportunity of disburthening themselves, that at length they may come into their desired rest. Such persons as are secretly murdered, or that secretly murder themselves, are most apt to appear again, wandering near the place where the catastrophe happened, till the radical moisture of the body be totally consumed. After which, according to the opinion of Paracelsus, and many other learned writers, they can appear no more, but are resolved into their first being or *astrum*, after a certain term of years, when the *humidum radicale* becomes exiccate and dried up, according to the vigour or force of that first attraction, which was the only cause of their returning. And hence was derived the custom of urns and funeral piles amongst the Romans, who used to reduce the corpses of their deceased friends into ashes, lest their ghosts should return and wander; which it was supposed they could not do when the body was burnt, and all moisture totally exterminate and consumed thereby.

The manner and seasons wherein apparitions or ghosts appear, are as various as they are uncertain. Sometimes before the person to whom they properly belong departs this life, they will by external visible presentation of themselves, forewarn him of the time or day wherein death shall approach him. Sometimes the apparition of a person will appear to its beloved friend, husband, wife, or relation, at many thousand miles distance, to acquaint them of its departure from this life, whilst otherwise the party would be totally ignorant of the event. And it has often been known, that when no one individual of the kindred or family of the deceased person has been visited or disturbed by it, or even made sensible of its appearing, yet to some of its most intimate or beloved acquaintance it discovers itself, and importunes them to perform some ceremony or promise, that it may be admitted into rest. At other times it discovers some treasure which was hidden by the deceased party; or else some murder which it had committed. But the most frequent cause of their returning, is when the party himself hath been privately murdered; for such is the poisonous malice and rancorous spirit of murderers, that innocent blood thus inhumanly spilt, crieth up to heaven, and the departed spirit cannot rest till the murder be made manifest to the world, after which discovery it is received into rest. This is the reason, why for many years together, ghosts continue to be seen in one particular place, ever watching for fit opportunity to discover or make known the cause of its appearing; but which is often attended with great difficulty and delay, as well on account of the natural timidity of human beings, as for want of the proper organs of corporeal voice and touch in the spirit, which being no part of their quality or essence, is procured with great difficulty, and at best but inarticulate, doleful, and in broken accents. That this is true, the usual manner of their appearance in a great measure proves; for all that they are able to effect, if they have been murdered, is to appear near the place where the body lies, and to seem as if they sunk down or vanished in the same; or else to appear in the form of a murdered corps, with mangled body, and bleeding wounds, dishevelled hair, and convulsive countenance; but it is rarely known that such apparitions have plainly spoken, or uttered by words, either the time and place of their murder, or the cause, manner, or person's name; unless the perpetration of the deed be marked with circumstances uncommonly horrid and execrable, in which cases I am told, the remembrance of the same doth so much more powerfully operate upon the faculties of the apparition, as to enable it to frame the similitude of a voice, so as to discover the fact, and give some leading clue to detect and punish the wicked perpetrator.

But

But to give a reason why apparitions are so seldom seen, and why those which do appear cannot without man's assistance accomplish their design, it may easily be conceived, that all spirits, or spiritual substances, of what denomination soever, have their life, breath, and vital motion in another source, very different from the elements of this external world; and consequently, that their manifestation and continuance in this source, whenever they appear, must be both painful and irksome; as it would be for a man to continue with his head under water, or for the inhabitants of the watery element to be placed upon dry land. But it is only the apparitions of persons thus suddenly taken off in their sins, or of such as die in confirmed and habitual wickedness, that, in the natural course of things, are subject to return into the terrestrial source, and manifest themselves to human eyes. For if those who die in perfect peace, with minds divested by true repentance of every turbulent and sinful desire, enter at once into their desired rest, without the possibility of returning to this sublunary world again, but in the capacity of angels of light, to execute the divine missions of the Deity.

In the writings of *Plato*, there are many strange and singular representations of the apparitions or departed souls of men, with accounts of their torments and purgations, the cause of their returning, what their nature and employment is, their substance and property, food and nourishment; from all which that great philosopher and historian was induced to believe, that when the spirits of good and exemplary men returned, it was to persons of a like habit and disposition with themselves, warning them in their sleep of certain dangers or malevolent designs forming against them; or else conveying heavenly doctrines, or ingenious inventions to their mind, for the honour of religion, or the good of society. And in like manner, if the ghost of a wicked and execrable character returned, it was to those of a profligate and abandoned course of life, whom it instigates, asleep or awake, to the invention and exercise of notorious villanies, to blasphemies against God, and to sedition, rapine, and murder amongst men. The disciples of *Pythagoras* established an opinion not very different from this. They held that there was a continual transmigration and translation of souls from one state to another, till they became deified at last; and that they frequently appeared to persons of the same bent of mind and inclination, to instruct and forewarn them. It was also the opinion of many great and wise philosophers, that the *Oracles* of old proceeded from such spirits as had been the ghosts or departed souls of wise and excellent men; as the oracle of Apollo, the oracle of Pallas, or Minerva, and the like. And upon the whole, the variety of examples throughout the writings of wise and learned men, in all

all ages of the world, in all countries, and in the sacred, as well as in profane history, of the various appearances of ghosts and apparitions of departed men, as well as of spirits of other kinds and properties, afford the strongest inducement to our belief of their existence and agency in this sublunary world, than we should, in this more learned and enlightened age, be otherwise so willing to admit as an article of our belief. But seeing these things are absolutely so, we will now give some particulars of the mode and manner in which magicians and other professors of the Black Art obtain an intercourse with them; from which it will appear, that the Science of Astrology is an art founded in philosophy and mathematical demonstration, and totally unconnected with any agency, but what proceeds from second causes under God and Nature; whereas the other is a wicked confederation with evil spirits, which ought to be discouraged and suppressed by the utmost exertions of the iron arm of the law.

To the honour of the present century, we have had but few instances of persons openly and publicly entering into compact with spirits, or of professing to resolve questions in futurity, by means of their agency; but prior to that æra, it was no uncommon thing; and those who had an opportunity of blending classical learning, and scientific speculation with it, were esteemed the most elevated characters of their day, and were frequently honoured with the protection and confidence of princes and other men of rank and fortune. I shall here mention a few of those characters, who were esteemed the most considerable magicians of their time.

Appollonius Tayaneus, in the time of the Emperor Domitian, from the wonderful and miraculous things he did through the agency of spirits, added to so great an appearance of sanctity and simplicity, with which his exterior was endowed by nature, occasioned all ranks of people to regard him with a mixture of reverential awe and respect. Even the Christians who lived within the circle of his fame, thought him something more than human, and looked up to him with confidence and esteem. From a variety of circumstances, and accounts in different authors, it appears that this singular character had not only the faculty of knowing what was transacting at many hundred miles distance, but had the means also of being conveyed almost instantaneously from one place to another, where he was seen, known, and conversed with many of his acquaintance. It is also recorded of him, that at the instant the Emperor Domitian was assassinated at Rome, he spoke of it in a public assembly at Ephesus, and declared the mode and manner of his death; which upon enquiry, was found to happen at the precise moment of time he spoke of it, and in the exact manner he had described.

Doctor

The Order of the Inspirati.



APPOLONI^{VS} TYANEVS in Domitian's Time.



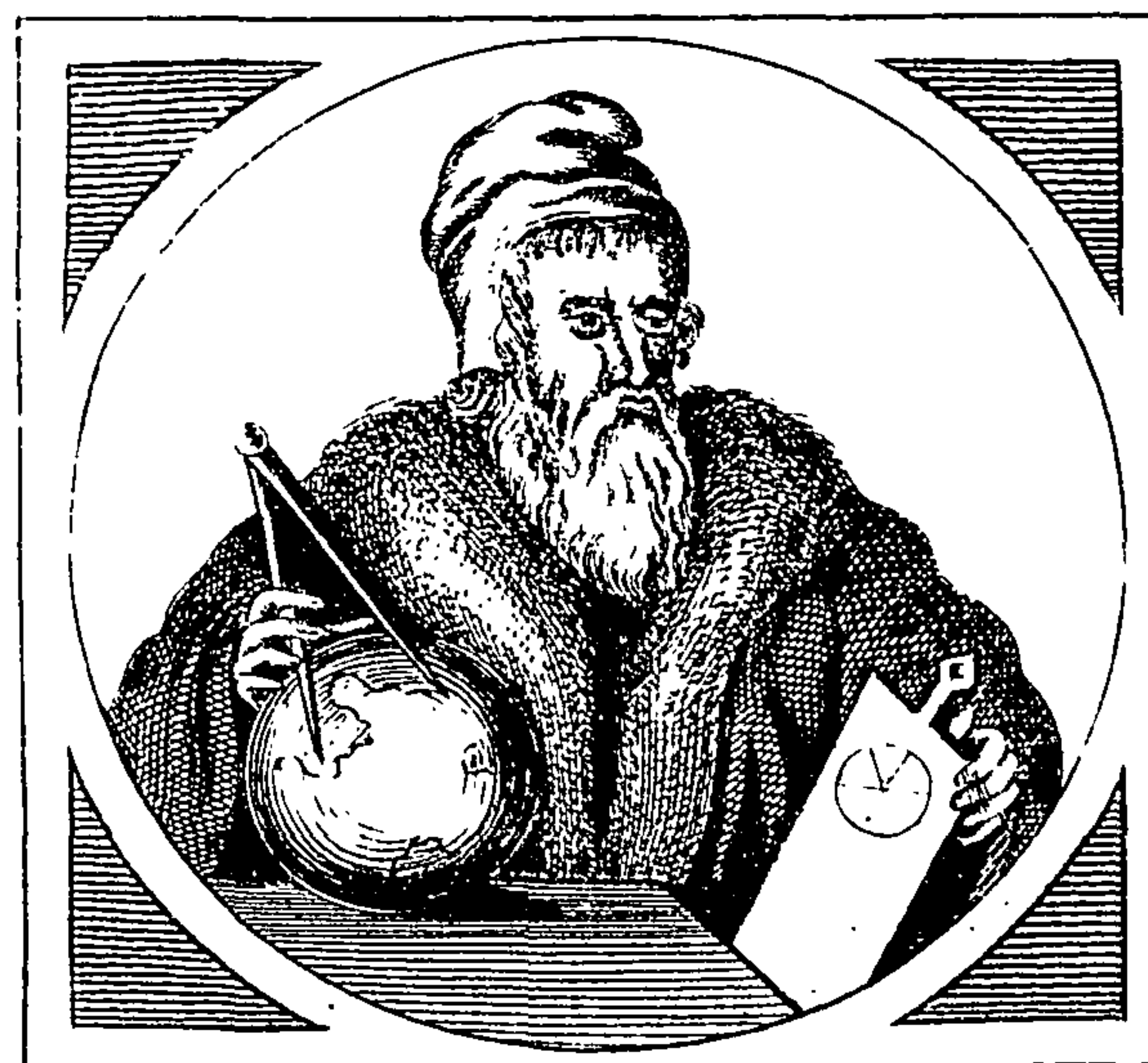
MAHOMET receives his Law by Inspiration



ROGER BACON an Englishman



EDW.^d KELLY Prophet or Seer to D^d DEE.



D^d DEE avoucheth his Songs is brought by Angelical Ministry.



PARACELSUS Receiveth from the Inspiration of Spirits.

Doctor Dee was another very extraordinary character of the same class, and a native of this island. He was not only a famous magician, but a great author, having written upwards of forty-eight different volumes, the first of which was published in 1594. A full account of his conversation and intercourse with spirits is now extant, written with his own hand, and esteemed a very curious and singular performance. His company and acquaintance was much sought by the Emperor Charles V. and by Ferdinand his Brother; and during his travels over the continent, he had not only every respect and attention paid him, but his company was courted by all the learned and religious people wherever he went. He was certainly one of the most learned men of the age in which he lived, and had collected a library of upwards of 4,000 volumes of curious and valuable writings, mostly upon physical, theological, and occult subjects, which he had the misfortune to see burnt by the fury of a mob, who assailed his house, and conspired against his life, under an idea that by magical spells and incantations he had altered the natural course of the weather, and brought on storms, hurricanes, tempests, and continual rain, in order to ruin the harvest, and destroy the fruits of the earth. Yet he bore the torrent and fury of this infatuated multitude with the greatest composure, saying, "*They would see their error soon enough to treat him with greater kindness hereafter, than their persecution was now cruel.*" And so it happened; for having by means of his confederacy with spirits foretold and detected a fatal conspiracy against his country, he was then as much honoured and caressed as he had before been stigmatized and abused by the hasty multitude. He wrote the mathematical preface to Euclid's Elements, and has left tables of the harmony and extent of numbers infinitely beyond the capacity of the present times, though so much more learned and refined.

Edward Kelly was also a famous magician, and the companion and associate of Dr. Dee, in most of his magical operations and exploits; having been brought in unison with him, (as the Doctor himself declares, in the preface to his work upon the ministration of spirits) by mediation of the angel Uriel. But Dr. Dee was undoubtedly deceived in his opinion, that the spirits which ministered to him were executing the Divine will, and were the messengers and servants of the Deity. Throughout his writings on the subject, he evidently considers them in this light, which is still more indisputably confirmed by the piety and devotion he invariably observed at all times when these spirits had intercourse with him. And further, when he found his coadjutor Kelly was degenerating into the lowest and worst species of the magic art, for the purposes of fraud and avaricious gain, he broke off all manner of connexion with him, and

would never after be seen in his company. But it is believed, that the Doctor, a little before his death, became sensible that he had been imposed upon by these invisible agents, and that all their pretences of acting under the auspices of the angel Uriel, and for the honour and glory of God, was but mere hypocrisy, and the delusions of the devil. Kelly, being thus rejected and discountenanced by the Doctor, betook himself to the meanest and most vile practices of the magic art; in all which pursuits money, and the works of the devil, appear to have been his chief aim. Many wicked and abominable transactions are recorded of him, which were performed by witchcraft, and the mediation of infernal spirits; but nothing more curious, or more *apropos* to the present subject, than what is mentioned by *Weaver*, in his *Funeral Monuments*. He there records, that Edward Kelly the magician, with one Paul Waring, who acted in capacity of companion and associate in all his conjurations, went together to the Church-yard of *Walton Ledale*, in the county of Lancaster, where they had information of a person being interred, who was supposed to have hidden or buried a considerable sum of money, and to have died without disclosing to any person where it was deposited. They entered the church-yard exactly at twelve o'clock at night; and having had the grave pointed out to them the preceding day, they exorcised the spirit of the deceased by magical spells and incantations, till it appeared before them, and not only satisfied their wicked desires and enquiries, but delivered several strange predictions concerning persons in that neighbourhood, which were literally and exactly fulfilled. It was vulgarly reported of Kelly, that he outlived the time of his compact with the devil, and was seized at midnight by some infernal spirits, who carried him off in the sight of his own wife and children, at the instant he was meditating a mischievous scheme against the minister of his parish, with whom he was greatly at enmity.

The character of *Mahomet* is too well known throughout all the world, as the institutor of the Turkish Alcoran, to need much comment from me in this place. It is sufficient if I only remark, that all his wonderful miracles were wrought by the aid and confederacy of familiar spirits, which he called the ministration of angels from heaven, from whence he pretended to have been sent, to perform the commands of the Deity, and to correct and reform the manners and religion of mankind. He had the peculiar address to establish this idea amongst his contemporaries, and to lay the foundation of the present faith at Constantinople, and throughout the vast extent of the Turkish territory.

Roger Bacon was another very famous associate with familiar spirits, and performed many astonishing exploits through their means. He was born

at

at Ilchester, in Somersetshire, where he studied philosophy, alchemy, and astrology; and wrote several learned and ingenious books, the manuscripts of which are now preserved as valuable curiosities, in the British Museum. I attempted to make some interesting extracts from them, for the further amusement and information of my readers in this part of my work; but I was prevented from going on with my plan, under an idea that the information it would convey, might be productive of mischievous consequences to society, by putting too much in the power of evil-minded and vindictive men.

Paracelsus was a great cabalist, physician, astrologer, and magician, and appears to have been intimately acquainted with all the secret and occult properties of nature. He was the first we know of who ever treated upon *animal magnetism*; and his performances in that line were such as to astonish the world, and to draw upon him the united gratulations of the diseased and infirm. His method, notwithstanding it is so clearly laid down by himself, and demonstrated by a variety of pleasing examples in his works, has lain dormant till the present time; and now it begins again, under the successful endeavours of a few persevering individuals, to convince mankind that the secret and occult properties of nature are not yet half known or understood; nor their advantages received with that thankfulness and regard, which ought incessantly to be poured forth to the great Author of our being, for the blessings that may so easily be derived from them. This was the opinion and nearly the words of *Paracelsus* himself, who hath been recorded by all our Biographers, as a learned, judicious, and ingenious philosopher. Yet his having been so much addicted to magical rites and ceremonies, and having had familiarity with spirits and devils, and performed so many wonderful conjurations through their means, that he was on that account ever supposed to have done by the agency of spirits, what was really the true and genuine effects of nature only.

As to the particular forms, manner, method, rites, ceremonies, consecrations, time, place, and ability requisite to call up and enter into compact or familiarity with spirits, it is neither safe nor prudent, nor consistent with the well being of society in general, that I should dwell so extensively upon it, or give such explanations, as to put a weapon into the hands of the blood-thirsty or revengeful, to despise their enemies or neighbours, or to enable those who are prone to such dealings from idle curiosity, completely to put in execution this species of league with the devil, or his subordinate agents; which is as strickly forbidden by the word of God, as by the laws of the land. Let it suffice therefore, that I only
give

give such an outline of it, as may enable the inquisitive reader sufficiently to judge of its merits, without enabling the viciously inclined to adopt its practice.

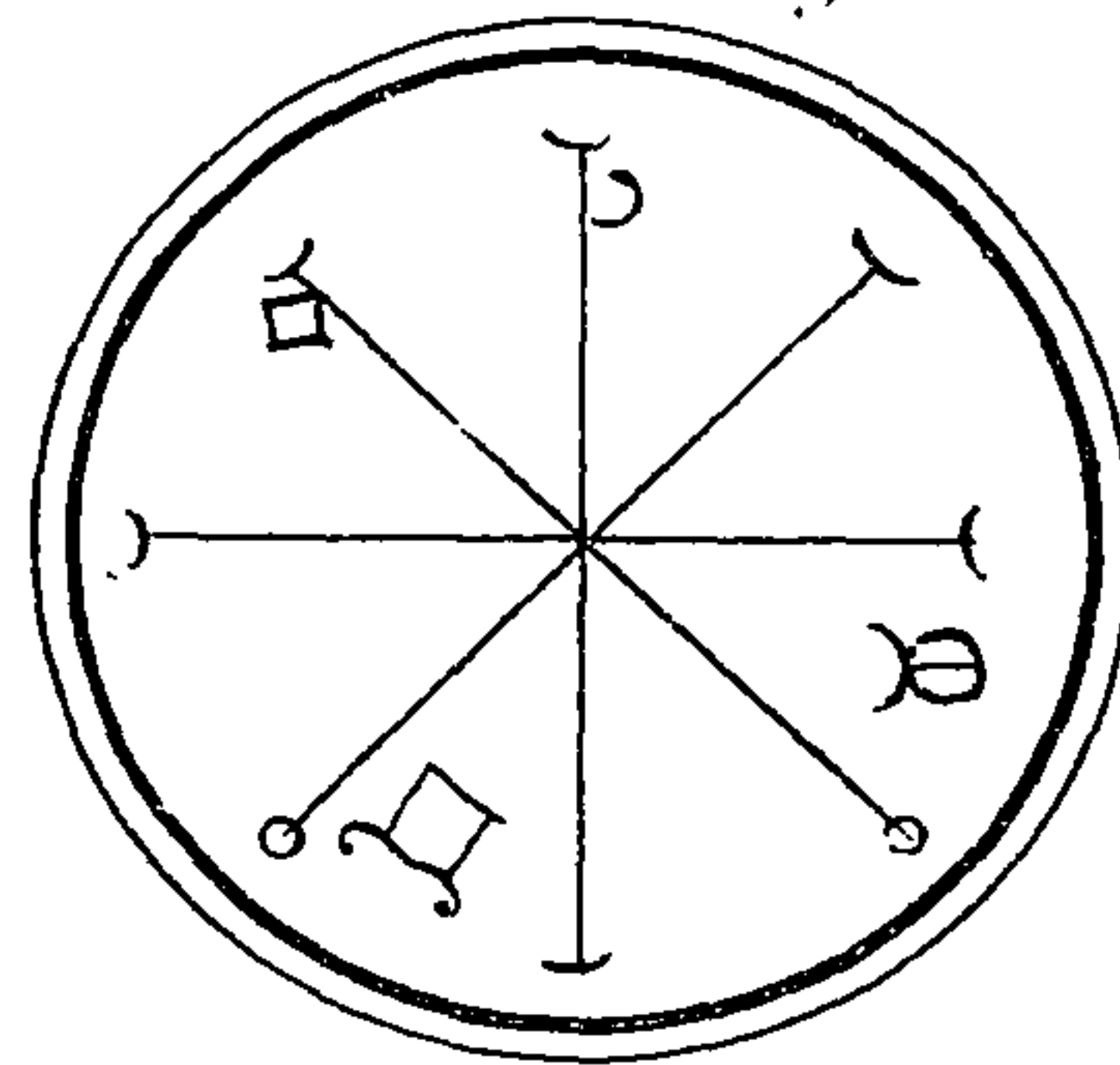
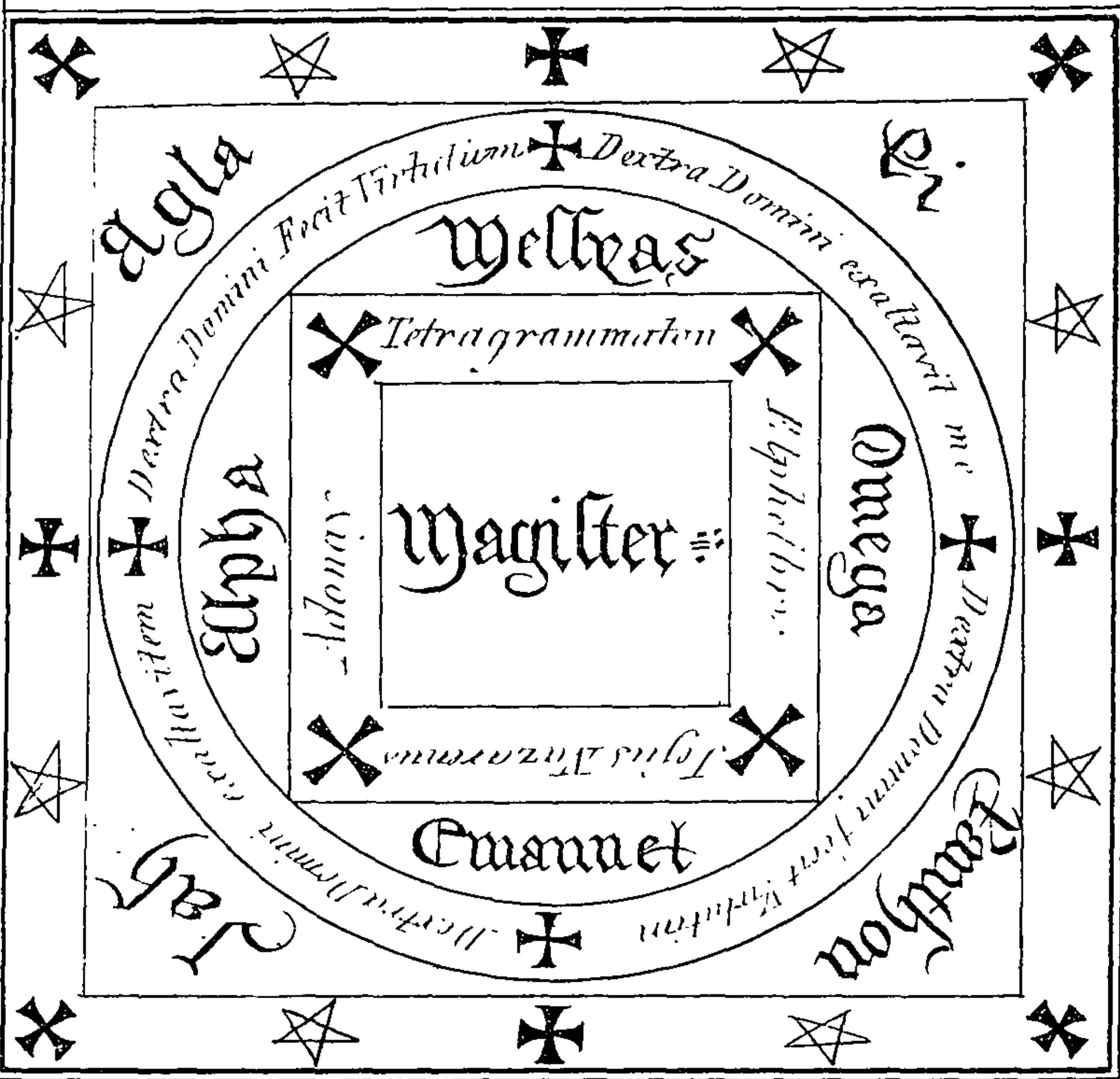
Magicians and conjurors who have written upon and followed the Black Art, contend, that it is possible to raise up and hold an intercourse with spirits, and make them subservient to their commands, without any absolute compact or bargain with the devil, either for body, soul, or works; though they are ready to admit, that such a snare is eventually intended for them, by their officiousness upon every occasion, and they are as willing to believe that it has induced many of its practitioners to form such a league. Many instances indeed have been adduced in proof of this, where at the expiration of a certain term, the devoted wretch has been carried off in the height of his sins and wickedness, by some of the infernal messengers. Such is recorded to have been the case with several in this island; such also was the case with *Lewis Gaufridi*, a French priest, who, to be revenged of some of his superiors for not promoting him to the extent of his ambition, compacted with the devil for fourteen years power, to commit whatever detestable works he pleased, without detection or discovery. So likewise, a certain execrable character, who a few centuries back overran this country, was at length publicly taken off in fire and flame, before the eyes of a vast multitude, having covenanted for body, soul, and works. It is to be noted, that where a compact is formed, the devil, or familiar spirit, is ever at hand, and ready to obey the magician's will, without ceremony or trouble; but where no such league or compact exists, and the magician is desirous of bringing up or *constraining* some particular spirit or ghost to appear before him, there are many rites and ceremonies to be performed. In the first place they are to fix upon a spot proper for such a purpose; which must be either in a subterraneous vault, hung round with black, and lighted by a magical torch; or else in the centre of some thick wood or desert, or upon some extensive unfrequented plain, where several roads meet; or amidst the ruins of ancient castles, abbeys, monasteries, &c. or amongst the rocks on the sea-shore; in some private detached church-yard, or any other solemn melancholy place, between the hours of twelve and one in the night, either when the moon shines very bright, or else when the elements are disturbed with storms of thunder, lightning, wind, and rain; for in these places, times, and seasons, it is contended, that spirits can with less difficulty manifest themselves to mortal eyes, and continue visible with the least pain, in this elemental external world.

When the proper time and place is fixed on, a magic circle is to be formed, within which, the master and his associate, (for in all these cases

Signs, Characters, and Magical Knife.

A Type or Figure of the Circle for the Master and his Fellows
to sit in shewing how, and after what fashion it should be made.

Whoever beareth this sign,
all spirits will do
him homage.



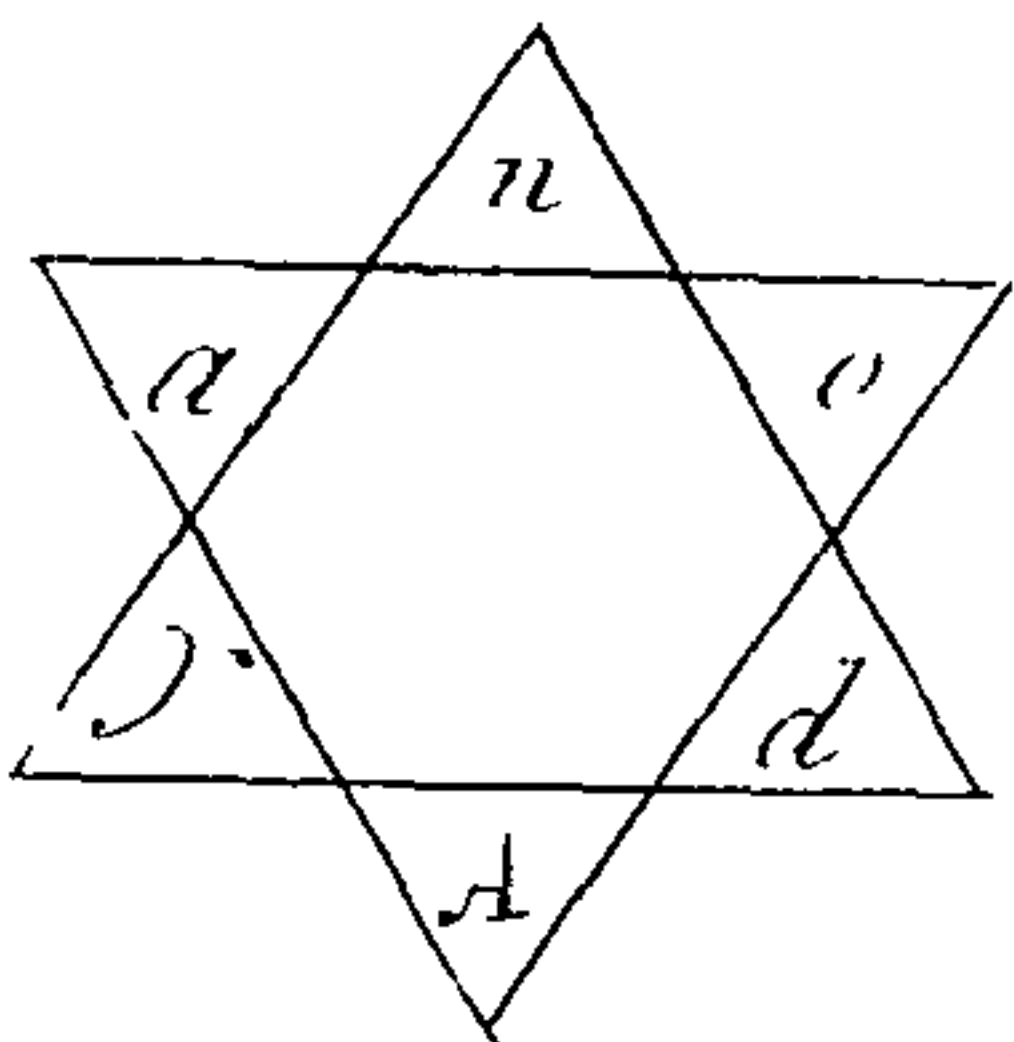
Wbsoever ⁷ ¹² Hm Sign



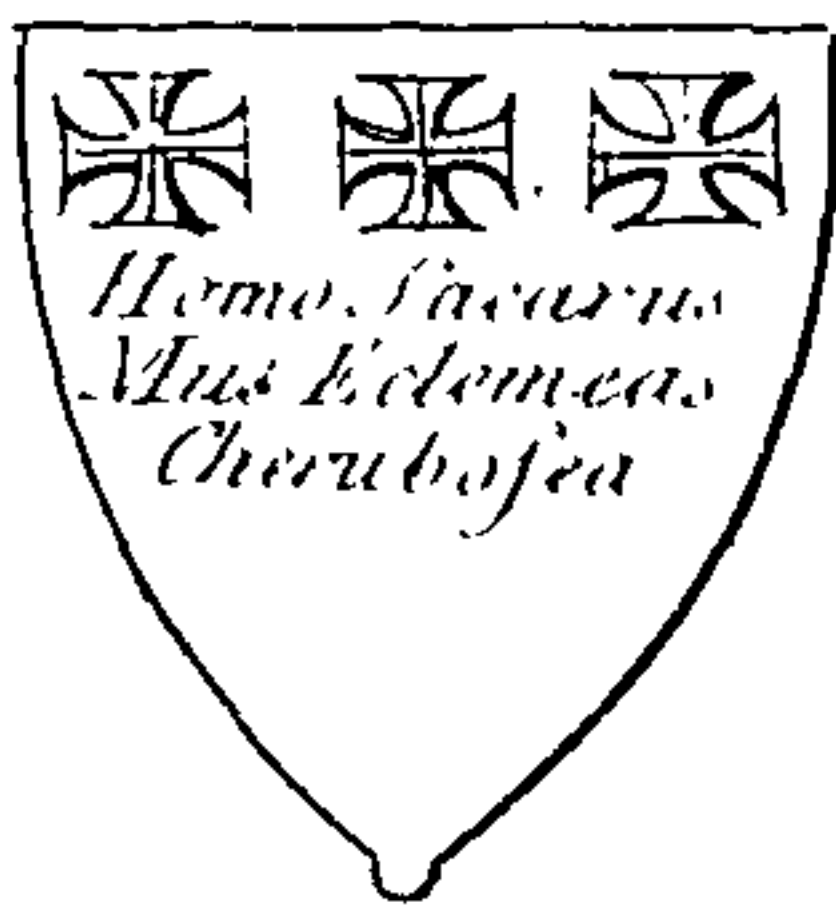
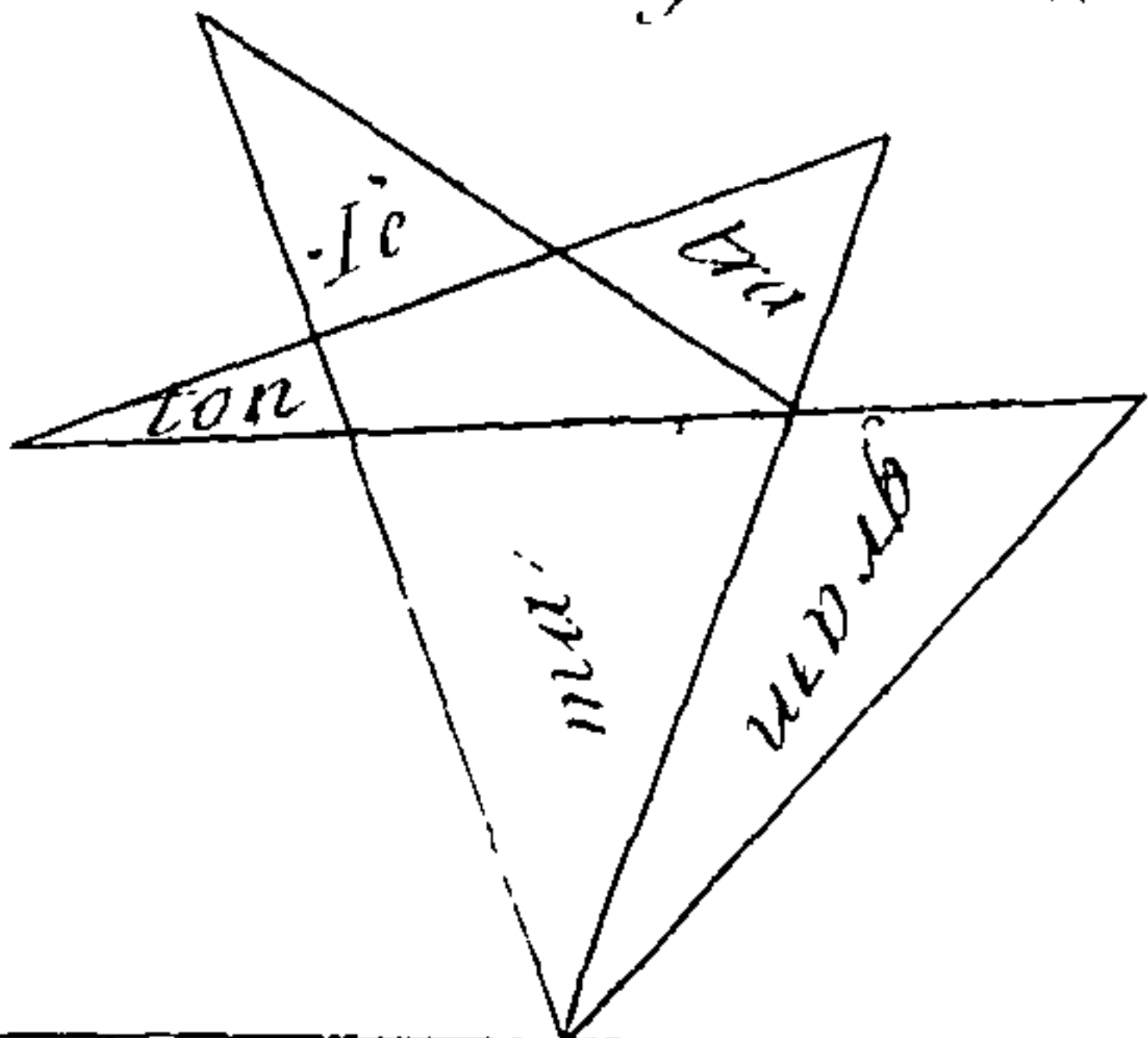
AGLA \div

This on the Other Side I ROR

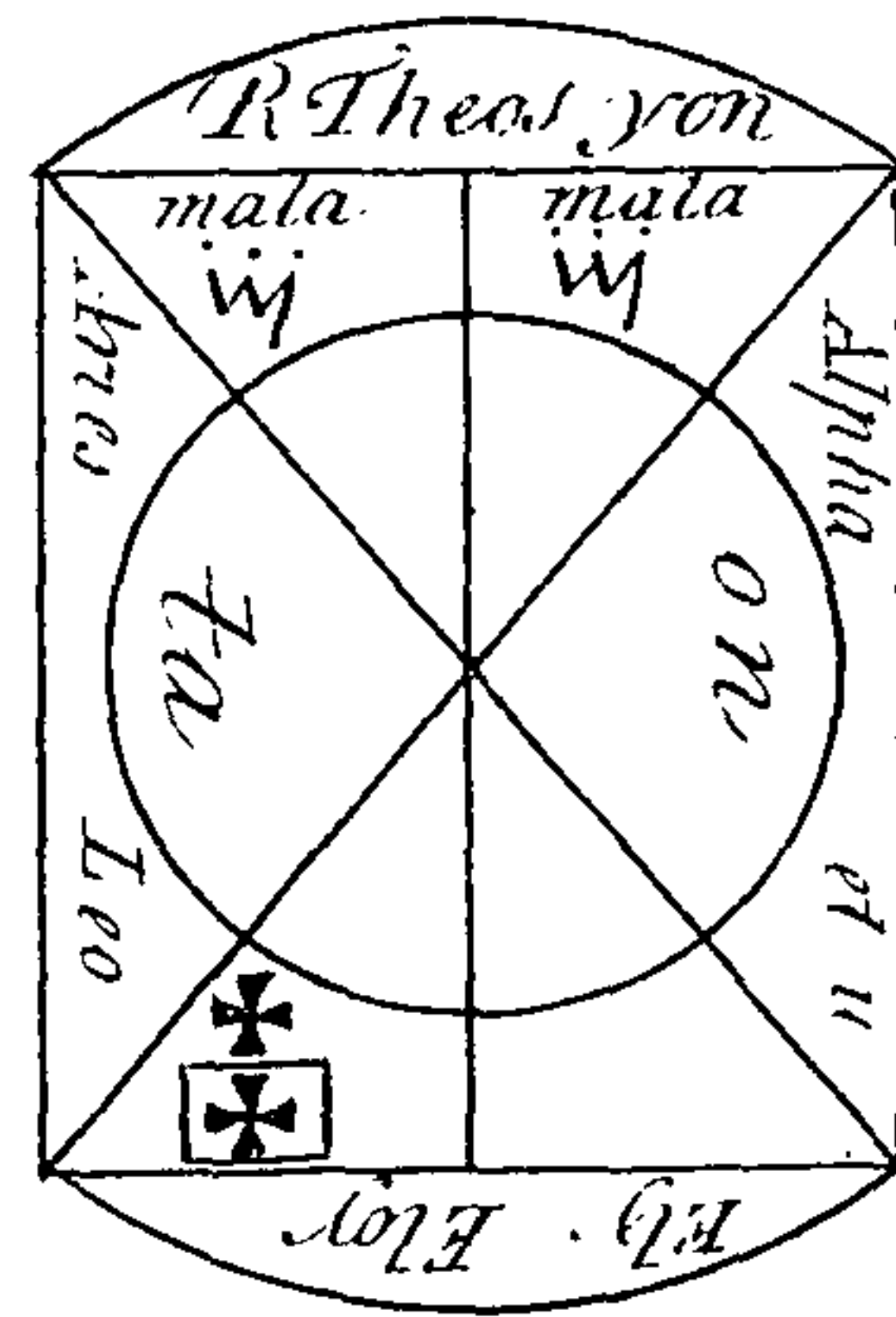
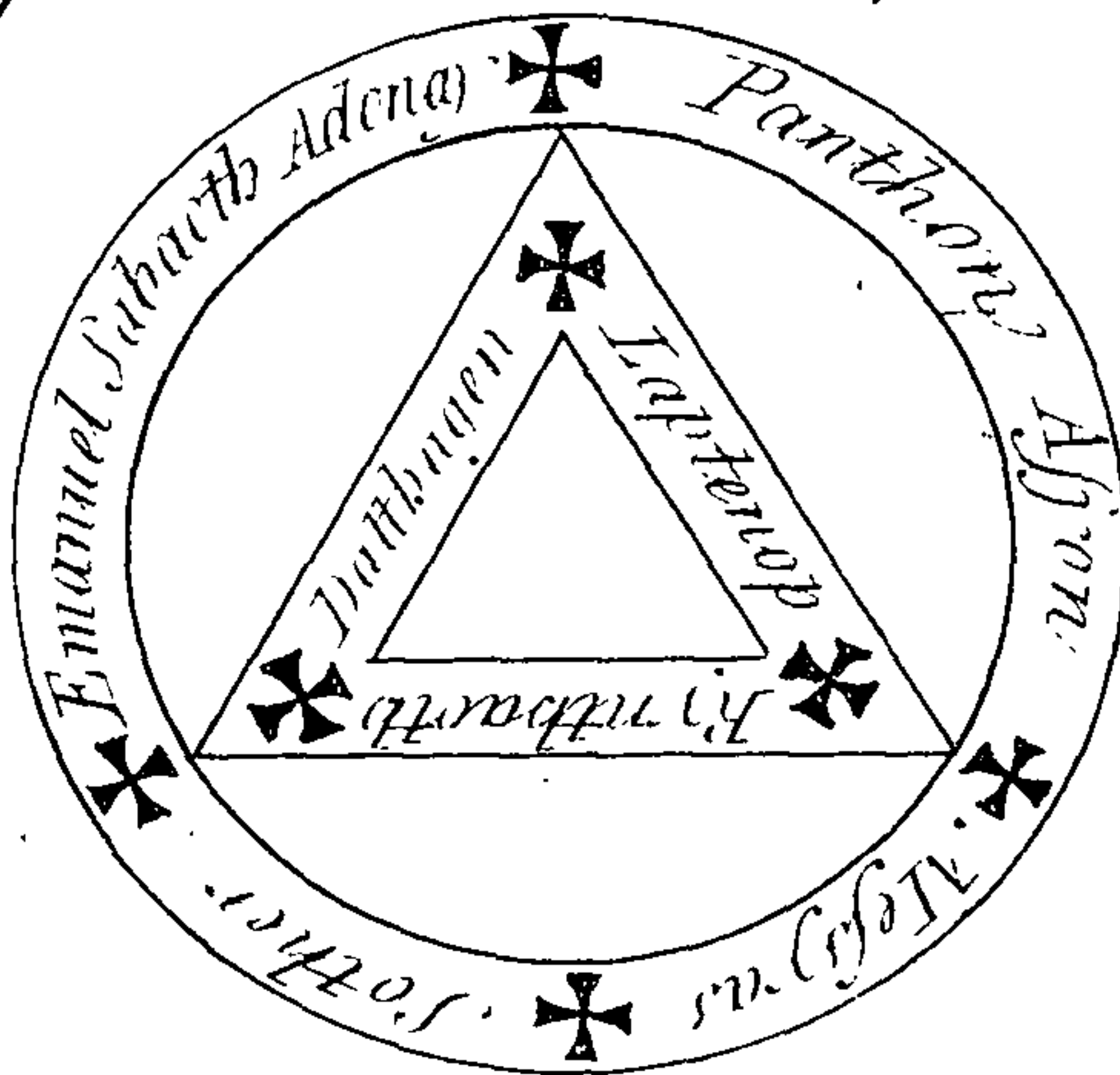
A Great Character



The Greatest Character



*The two Seals of the Earth without which
no Spirits will appear.*



eases there must be two persons) are carefully to retire. The dimensions of the circle is as follows: a piece of ground is usually chosen nine feet square, at the full extent of which parallel lines are drawn one within another, having sundry crosses and triangles described between them, close to which is formed the first or outer circle; then, about half a foot within the same, a second circle is described; and within that another square correspondent to the first, the centre of which is the seat or spot where the master and associate are to be placed. The vacancies formed by the various lines and angles of the figure, are filled up with all the holy names of God, having crosses and triangles described betwixt them, agreeable to a sketch I have given in the annexed place, where likewise I have projected the form of magic seals, pentacles, &c. &c. just to give the reader an idea of what is meant, whenever we have occasion to speak of them in the following discourse. The reasons assigned by magicians and others for the institution and use of circles, is, that so much ground being blessed and consecrated by such holy words and ceremonies as they make use of in forming it, hath a secret force to expel all evil spirits from the bounds thereof; and being sprinkled with pure sanctified water, the ground is purified from all uncleanness; besides the holy names of God being written over every part of it, its force becomes so powerful, that no evil spirit hath ability to break through it, or to get at the magician or his companion, by reason of the antipathy in nature they bear to these sacred names. And the reason given for the triangles is, that if the spirit be not easily brought to speak the truth, they may by the Exorcist be conjured to enter the same, where by virtue of the names of the Essence and Divinity of God, they can speak nothing but what is true and right. The circle therefore, according to this account of it, is the principal fort and shield of the magician, from which he is not, at the peril of his life to depart, till he has completely dismissed the spirit, particularly if he be of a fiery or infernal nature. Instances are recorded of many who perished by this means; particularly *Cbiancungi*, the famous Egyptian fortune-teller, who in the last century was so famous in England. He undertook for a wager, to raise up the spirit *Bokim*, and having described the circle, he seated his sister *Napala* by him as his associate. After frequently repeating the forms of exorcism, and calling upon the spirit to appear, and nothing as yet answering his demand, they grew impatient of the business, and quitted the circle, but it cost them their lives; for they were instantaneously seized and crushed to death, by that infernal spirit, who happened not to be sufficiently constrained till that moment, to manifest himself to human eyes.—The usual form of consecrating the circle, is as follows:

I who am the servant of the Highest, do by the virtue of his Holy Name Immanuel, sanctify unto myself the circumference of nine foot round about me, ✠ ✠ ✠ from the east, Glaurab; from the west, Garron; from the north, Gabon; from the south, Berith; which ground I take for my proper defence from all malignant spirits, that they may have no power over my soul or body, nor come beyond these limitations, but answer truly being summoned, without daring to transgress their bounds. Worrk. worrab. harcot. Gambalon. ✠ ✠ ✠.

The proper attire or *pontificalibus* of a magician, is an ephod made of fine white linen, over that a priestly robe of black bombazine, reaching to the ground, with the two seals of the earth, drawn correctly upon virgin parchment, and affixed to the breast of his outer vestment. Round his waste is tied a broad consecrated girdle, with the names *Ya, Ya, ✠ Aie, Aaie, ✠ Elibra ✠ Elobim ✠ Sadai ✠ Pab Adonai ✠ tuo robore ✠ Cinctus sum ✠*. Upon his shoes must be written *Tetragrammaton*, with crosses round about; upon his head a high-crown cap of sable silk; and in his hands an holy Bible, printed or written in pure Hebrew. When all these things are prepared, the circle drawn, the ground consecrated, and the Exorcist securely placed within the circle, he proceeds to call up or conjure the spirit by his proper name, under a form somewhat similar to the following:

I exorcise and conjure thee thou spirit of (here naming the spirit) by the holy and wonderful names of the Almighty Jehovah, Athanato ✠ Aionos ✠ Dominus sempiternus ✠ Aletbeios ✠ Sadai ✠ Jehovah, Kedesh, El gabor ✠ Deus fortissimus ✠ Anapheraton, Amorule, Ameron ✠ ✠ ✠ Pantbon ✠ Graton ✠ Muridon ✠ Jah, Jehovah, Elobim pentasseron ✠ ✠ trinus et unus ✠ ✠ ✠ ⊕ I exorcise and conjure, I invoke and command thee thou aforesaid spirit, by the power of angels and archangels, cherubim and seraphim, by the mighty Prince Garonzon, by the blood of Abel, by the righteousness of Seth, and the prayers of Noah, by the voices of Thunder and dreadful day of Judgment; by all these powerful and royal words abovesaid, that without delay or malicious intent, thou do come before me here at the circumference of this consecrated circle, to answer my proposals and desires without any manner of terrible form either of thyself, or attendants; but only obediently, fairly, and with good intent, to present thyself before me, this circle being my defence, through his power who is Almighty, and hath sanctified the name of the Father, Son, and Holy Ghost. Amen.

After these forms of conjuration, and just before appearances are expected, the infernal spirits make strange and frightful noises, howlings, tremblings, flashes, and most dreadful shrieks and yells, as forerunners of their

their presently becoming visible. Their first appearance is generally in the form of fierce and terrible lions or tygers, vomiting forth fire, and roaring hideously about the circle; all which time the Exorcist must not suffer any tremor or dismay; for in that case they will gain the ascendancy, and the consequences may touch his life. On the contrary, he must summon up a share of resolution, and continue repeating all the forms of constriction and confinement, until they are drawn nearer to the influence of the triangle, when their forms will change to appearances less ferocious and frightful, and become more submissive and tractable. When the forms of conjuration have in this manner been sufficiently repeated, the spirits forsake their bestial shapes, and endow the human form, appearing like naked men of gentle countenance and behaviour. Yet is the magician to be warily on his guard that they deceive him not by such mild gestures; for they are exceedingly fraudulent and deceitful in their dealings with those who constrain them to appear without compact; having nothing in view but to suborn his mind, or accomplish his destruction. But with such as they have entered into agreement with, they are frequent and officious; yet they more or less require certain oblations which are frequently made to them, such as fumigations, odours, offerings or sacrifices of blood, fire, wine, ointments, incense, fruits, excrements, herbs, gums, minerals, and other ingredients; by which, from a magical cause, they have more influence and authority over the degenerated souls of men, and can insinuate into their inmost source and affection, piercing even through their bones and marrow, till they have so habituated them to their service, that it becomes their daily and sole delight to accomplish every villainy and abomination which the malicious and subtle instigations of Satan might purpose to lead them. So that the Exorcist must be greatly upon his guard, and when he has completed the exorcism, and made such enquiries as he wished to obtain from the spirit, he must carefully discharge him by some form or ceremony like the following:

Because thou hast diligently answered my demands, and been ready to come at my first call, I do here licence thee to depart unto thy proper place, without injury or danger to man or beast; depart I say, and be ever ready at my call, being duly exorcized and conjured by sacred rites of Magic; I charge thee to withdraw with quiet and peace; and peace be continued betwixt me and thee, in the name of the Father, Son, and Holy Ghost. Amen.

After this ceremony is finished, the spirit will begin to depart, resuming again the shrieks and noises, with flashes of fire, sulphur, and smoke, which the magician is to endure with patience, until it is entirely gone off,
and

and no signs whatever of such a procedure left. Then he may venture to withdraw from the circle, repeating the Lord's Prayer, after which he may take up the various utensils, and having destroyed all traces of the circle, may return in safety to his proper home.

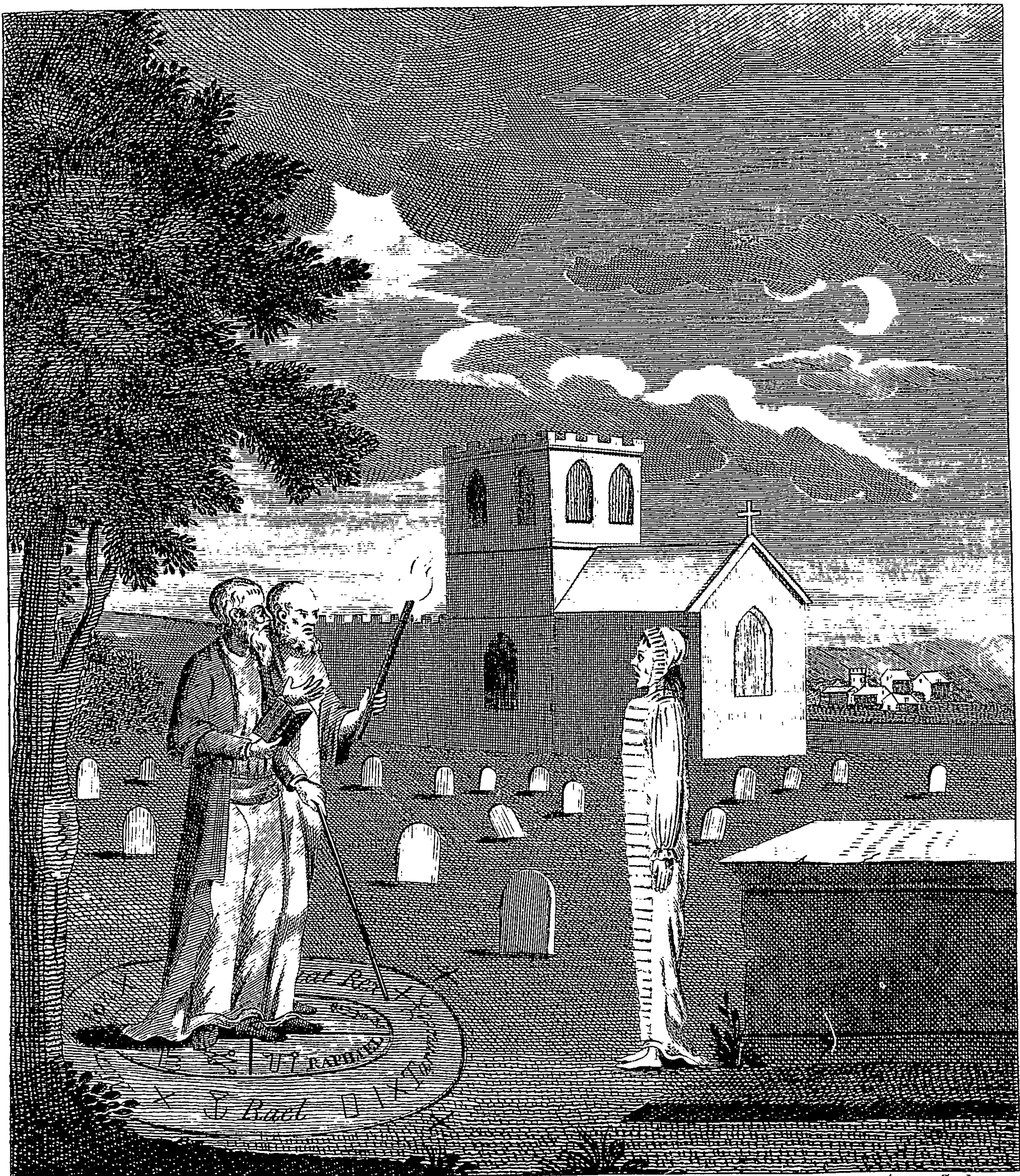
But if, instead of infernal or familiar spirits, the ghost or apparition of a departed person is to be exorcised, the process is materially different. The person being fixed on, whose apparition is to be brought up, the magician, with his assistant, must repair to the church-yard or tomb where the deceased was buried, exactly at midnight; as the ceremony can only be performed in the night, between the hours of twelve and one. The grave is first to be opened, or an aperture made, by which access may be had to the naked body. The magician having described the circle, and holding a magic wand in his right hand, while his companion or assistant beareth a consecrated torch, he turns himself to all the four winds, and touching the dead body three times with the magical wand, repeats as follows :

By the virtue of the holy resurrection, and the torments of the damned, I conjure and exorcise thee, spirit of N. deceased, to answer my liege demands, being obedient unto these sacred ceremonies, on pain of everlasting torment and distress: Then let him say, Berald, Beroald, Balbin gab gabor agaba; Arise, arise, I charge and command thee.

After which forms and ceremonies, the ghost or apparition will become visible, and will answer to any questions put to it by the Exorcist.

But if it be desired to put interrogatories to the spirit of any corps that hath hanged, drowned, or otherwise made away with itself, the conjuration must be performed while the body hangs, or on the spot where it is first found after the suicide hath been committed, and before it is touched or removed by the coroner's jury. The ceremony is as follows: The Exorcist binds upon the top of his wand a bundle of St. John's wort, or *milliès perforatum*, with the head of an owl; and having repaired to the spot where the corps lays, at twelve o'clock at night, he draws the circle, and solemnly repeats the following words :

By the mysteries of the deep, by the flames of Banal, by the power of the east, and the silence of the night, by the holy rites of Hecate, I conjure and exorcise thee thou distressed spirit, to present thyself here; and reveal unto me the cause of thy calamity, why thou didst offer violence to thy own liege life, where thou art now in being, and where thou wilt hereafter be. He then gently smiting



Sibby Del

Ames Sculp

EDWD^d KELLY, A MAGICIAN.

in the act of invoking the Spirit of a Deceased Person.

D^r Dece Works

ing the carcase nine times with the rod, he says, *I conjure thee, thou spirit of this N. deceased, to answer my demands that I am to propound unto thee, as thou ever hopest for the rest of the holy ones, and ease of all thy misery; by the blood of Jesu which he shed for thy soul, I conjure and bind thee to utter unto me what I shall ask thee.*

Then cutting down the carcase from the tree, they lay his head towards the east; and in the space that this following conjuration is repeating, they set a chaffing dish of fire at his right hand, into which they pour a little wine, some mastic, and gum aromatic, and lastly a viol full of the sweetest oil, having also a pair of bellows, and some unkindled Charcoal to make the fire burn bright at the instant of the carcases rising. The conjuration is thus:

I conjure thee thou spirit of N. that thou do immediately enter into thy antient body again, and answer to my demands, by the virtue of the holy resurrection, and by the posture of the body of the Saviour of the world, I charge thee, I conjure thee, I command thee on pain of the torments and wandering of thrice seven years, which I, by the force of sacred magic rites, have power to inflict upon thee; by thy sighs and groans, I conjure thee to utter thy voice; so help thee God and the prayers of the holy church. Amen.

Which ceremony being thrice repeated, while the fire is burning with mastic and gum aromatic, the body will begin to rise, and at last will stand upright before the Exorcist, answering with a faint and hollow voice, the questions propounded unto it: Why it destroyed itself, where its dwelling is, what its food and life is, how long it will be ere it enter into rest, and by what means the magician may assist it to come to rest: Also, of the treasures of this world, where they are hid: Moreover, it can answer very punctually of the places where ghosts reside, and how to communicate with them; teaching the nature of astral spirits and hellish beings, so far as its capacity reacheth. All which when the ghost hath fully answered, the magician ought, out of commiseration and reverence to the deceased, to use what means can possibly be used for the procuring rest unto the spirit. To which effect he must dig a grave, and filling the same half full of quick lime, and a little salt and common sulphur, put the carcase naked into it; which experiment, next to the burning of the body into ashes, is of great force to quiet and end the disturbance of the astral spirit.

But in this, and in all cases where the ghosts or apparitions of deceased persons are raised up and consulted, great caution is to be observed by the

magician to keep close within the circle; for if the magician, by the constellation and position of the stars at his nativity, be in the predicament of those who follow the Black Art for iniquitous purposes, and are so distinguished by the positions of their radical figure of birth, it is very dangerous for such men to conjure any spirits without describing the circle after the form already given, and wearing upon their breast, or holding in their hand, the *Pentacle of Solomon*. For the ghosts of men deceased can easily effect sudden death to the magician born under such a conformation of the planets, even whilst in the act of being exorcised; and it is yet more remarkable, that the genethliacal figures of all persons who are naturally addicted to the pursuit of magical incantations and familiarity with spirits, do almost without exception portend sudden death, or an infamous termination of their existence.

Such are the rites, ceremonies, and modes, by which Exorcists and Magicians obtain familiarity with spirits, and carry on a visible and palpable correspondence with the devil. But besides these means of working wonders, they have others, of an invisible or occult property, as charms, spells, periapts, and the like, which operate both on the body and mind, by the agency of some secret power, which the patient can neither feel nor comprehend. They are of various names, forms, and qualities, according to the use for which they are intended. First, Amulets, which are moulded and engraved in the form of money or coin, under certain forms of consecration; and are hung about the neck in certain planetary hours, for the purpose of provoking to love and familiarity with some certain person desired. Secondly, Spells or Charms, consisting of various forms of words, and magical characters, written on virgin parchment, either with human blood, or ink of a particular quality, and consecrated under certain magical forms and ceremonies, to be worn as Periapts to cure diseases, to drive away evil spirits, to preserve from pestilence and infection, to make the party valiant and intrepid, and for a thousand other purposes. Thirdly, Corselets, which are the ancient *Danish* charm, being a kind of necklaces composed of thunder-stones, upon which are engraven certain magical characters, which resist all noxious influences, and all danger from thunder and lightning. Pentacles are a fourth sort of appendix, which conjurors and magicians use, being made with five corners, corresponding to the five senses of man, with their virtue and operation inscribed upon the five corners respectively. They are composed of fine linen doubled up, and done with cerecloth between. This figure the magician holds in his hand, lifting it up from the skirt of his garment to which it is annexed, whenever spirits that are raised become stubborn and rebellious, refusing to conform to the rites and

and requisitions of exorcism, and offering menacing looks and actions to the magician; but when these Pentacles are held out to the spirits, with the words *Glauron, Amor, Amorula, Beor, Beorka, Beroald, Anepberaton*, inscribed upon them, they become exceedingly tortured and amazed, and are more mild and tractable. There is likewise another sort of charm called *Telefms*, which is used by magicians when they perform any conjuration or exorcism by moon light in the mountains or valleys; upon which occasions they usually bury them towards the north, east, west, and south, within a hundred yards of the place where the circle is described; for these *Telefms* have the occult power of preventing any living creature coming near them until the incantation be performed, except the spirit itself whose presence they ardently desire, and are preparing to summon before them.

But to make fiery and infernal spirits more familiar, magicians have classed them into seven distinct orders, answerable to the nature and qualities of the seven planets; under which they respectively make offerings to them of aromatic fumigations, previous to invoking or calling them up; whereby they conceive the information or assistance required from them will be more easily and expeditiously obtained. Thus the fumigations for spirits under Saturn are made of frankincense-tree, pepper-wort roots, storax, and galbanum; by these the spirits *Marbas, Corban, Stilkon, Idas*, &c. and all of the first order in the astringency are appeased and provoked, when the *fumes* are put upon a *Tripod* in the hour of Saturn according to the planetary division. For Spirits under Jupiter, they take lignum aloes, ash-tree-keys, benjamin, storax, peacocks-feathers, and *lapis lazuli*, mixing the same with the blood of a stork, a swallow, or a hart; the brains being also added: the *fumes* are kindled in Jupiter's hour, and in a place appropriate to his nature. They make fumigations unto such spirits of the order of powers as are under Mars, in the planetary division, with aromatic gum, bdellium, euphorbium, load-stone, hellebore white and black, and an addition of sulphur to make them into an amalgama, with man's blood, and the blood of a black cat; which mixtures are said to be so exceeding magical, that without any other addition, they say, this fumigation is able of itself to make spirits under Mars appear before the Exorcist. To the spirits under Sol, being of the order of thrones, they likewise suffumigate saffron, musk, laurel, cinnamon, ambergrise, cloves, myrrh; and frankincense, musk, and the balsamic tree mixed up together with the brains of an eagle, and the blood of a white cock, being made up like pills, or little balls, and put upon the *Tripod*. The fumigations appropriate to spirits under Venus, are roses, coral, lignum aloes, and spermaceti, made up with sparrows brains, and blood of

of pigeons. To those under Mercury, they fumigate frankincense, mastic, cinquefoil, incorporated with the brains of a fox, and the blood of a magpye. To spirits under Luna, fumigations are offered of frogs dried, white poppy-seed, bull's eyes, camphire, and frankincense, incorporated with gooses blood, and *fluxus muliebris*. These are the divisions of spirits under the seven planets, with their fumigations; neither can it be denied, but that in many ceremonies of this kind, there is great inherent virtue, according to the doctrine of sympathy and antipathy, whereby every thing is drawn by its like in the idea, whether by words or actions, according to the saying, *In verbis, herbis & lapidibus latet virtus*; so that the ceremonies and charms, with other circumstances used by magicians, are doubtless prevalent to the accomplishment of that work which they undertake; to wit, The calling up and exorcising of infernal spirits by conjurations.

And as by natural reason every magical charm or receipt had its first institution; in like manner have magicians disposed the matter and manner together with the times of their utensils and instruments, according to the principles of nature: as the hour wherein they compose their garments, must either be in the hour of Luna, or else of Saturn, in the Moon's increase. Their garments they compose of white linen, black cloth, black cat-skins, wolves, bears, or swines skins. The linen, because of its abstracted quality for magic, delights not to have any utensils that are put to common uses. The skins of the aforesaid animals are by reason of the Saturnine and magical qualities in the particles of these beasts: Their sewing thread is of silk, cat's gut, man's nerves, asses hair, thongs of skins from men, cats, bats, owls, and moles, all which are enjoined from the like magical cause. Their needles are made of hedge-hog prickles, or bones of any of the abovementioned animals: their writing-pens are of owls or ravens, their ink of man's blood: their ointment is man's fat, blood, usnea, hog's grease, or oil of wales. Their characters are ancient Hebrew or Samaritan: their speech is Hebrew or Latin. Their paper must be of the membranes of infants, which they call virgin parchment, or of the skins of cats, or kids. They compose their fires of sweet wood, oil or rosin: and their candles of the fat or marrow of men or children: their vessels are earthen, their candlesticks with three feet, of dead mens bones: Their swords are steel, without guards, the points being reversed. These are their materials, which they particularly choose from the magical qualities whereof they are composed. Neither are the peculiar shapes without a natural cause. Their caps are oval, or like pyramids with lappets on each side, and fur within: their gowns reach to the ground, being furr'd with white fox-skins, under which they have a linen garment reaching

ing to their knee. Their girdles are three inches broad, and have, according to its use, many caballistical names, with crosses, trines and circles inscribed thereon. Their knives are dagger-fashion: and the circles by which they defend themselves are commonly nine feet in breadth, though the eastern magicians allow but seven; for both of which a natural cause is pretended, in the force and sympathy of numbers.

Such spells or charms as are compounded of some *edible* matter, with magical characters engraven upon them, are successfully given for agues, head-achs epilepsy, fits of the mother, and the like; and it is remarkable that they operate with most effect on those patients who are ignorant of the charm, or its properties. There are also particular magical characters attributed to the planets, whereof *Telestms*, *Periafts*, *Amulets*, and *Philtres* are composed by buryings under ground, writings, bindings, engravings, allegations, &c. which done in certain astrological hours are to conquer enemies, cure diseases, remove obstructions, provoke love, and preserve from evil both the body and the soul, which they contend are effected by mediums of this kind, assisted by the force of imagination. But as for philtres, potions, love-cups, and the like, they unquestionably proceed from a natural cause, and ought not to be classed with the occult properties of charms. There are many natural compositions of herbs and minerals, which have a surprising effect in themselves, without the least assistance from superstitious impressions, or the assistance of supernatural agency. For, in the commixture of bodies of a similar nature, there is a two fold power and virtue; first, when the celestial properties are duly disposed in any natural substance, then under one form divers influences of superior powers are combined; and secondly, when from artificial mixtures and compositions of natural things combined amongst themselves in a due and harmonical proportion, they agree with the quality and force of the heavens, under certain correspondent constellations. This proceeds from the occult affinity of natural things amongst themselves, by the force and sympathy of which many astonishing effects are produced.

In the writings of *Paracelsus* we find many surprising examples of the power of sympathy and antipathy, by means of images, telestms, and amulets, compounded of nothing more than natural ingredients. And he particularly describes an infallible method by the image of any bird or beast, to destroy it, or to effect its death, though at a distance. So likewise, by the hair, fat, blood, excrements, or excrescences of any animal, the diseases of that animal might be cured, and its life preserved or destroyed. This is seen in the *armary unguent*, and *sympathetical power*; and

there are multiplied instances and histories, both at home and abroad, of those who have been burnt, hanged, or otherwise punished, for the use of *waxen images*, which they compose in divers postures, under certain constellations, whereby the persons they are made to represent, have been severely tormented, or macerated to death. For according to the torment or punishment the magician, witch, or wizzard, may intend to inflict upon the object of their resentment, so they dispose the hour of the constellation, the quality of the compound, and the posture or semblance of the image; for if they intend to consume and pine away the health and life of any person they are offended with, they mould his image in wax, of such an ominous form and aspect as may conduce to the extent of their design, making several magical characters upon the sides of the head, describing the character of the planetary hour upon the breast of the image; the name of the persecuted person on its forehead; and the intended effect to be wrought upon him, on its back. If they mean to produce violent pains and tortures in the flesh or sinews, they stick pins or thorns in divers places of the arms, legs, or breast of the image. If to cast them into violent fevers and consumptions, they spend a certain hour every day to warm and turn the image before a doleful and lingering fire, composed of divers exotic gums and magical ingredients of sweet odours, and roots of particular shrubs, efficient and conducive to their purpose; and when the whole operation has been performed, and the image is compleated, it is astonishing to human comprehension what surprising effects they are capable of producing upon the body they are intended to represent; and the reader can only attain a competent idea of it, but by reading the accounts of the trials and confessions of many witches and wizzards, who suffered the law, in the last, and commencement of the present century, for transactions of this kind; an incredible number of which are not only recorded in the notes and memorandums of the judges, but attested by a great variety of noblemen, gentlemen, clergy, physicians, apothecaries, and others, who have been eye witnesses of these diabolical proceedings, and for which reason I shall on no account mention the most perfect and effectual part of the composition and preparation of these magical images, lest the evil-minded and malicious part of my readers should attempt to work abominable species of revenge upon the persons or property of their unsuspecting neighbours.

Thousands of other strange and uncouth inventions might be here described, according to the exact form in which tradition hath left them; but for the reason above assigned, the reader must be content with the general outline only. And as the Europeans have the ability of effecting such astonishing things by the medium of images, telestms, periapts, &c.

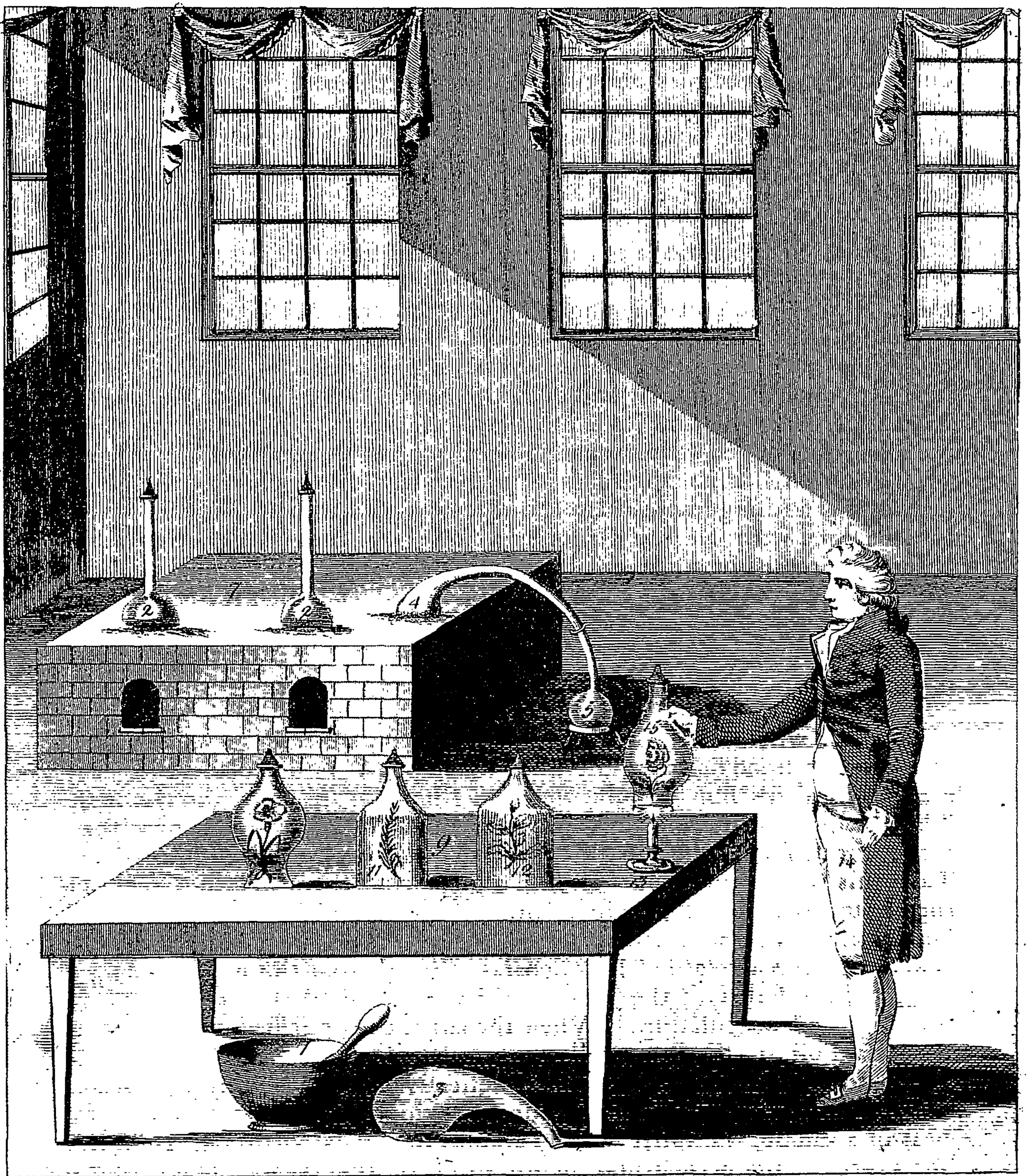
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so the Tartars have a faculty of producing similar effects by *bottles, wolves-skins, rods, basins, letters, or missives*, unto certain familiar spirits, who are the agents in their magic rites. As to the old and favourite trick of witches in the last century, that of *tying of the point*, we have reason to hope it has long since died away; for it is a charm which produces so strong an impediment to conjugal embraces, as totally to restrain the act of consummation betwixt married people; and the tying of this knot or ligament, under certain magical ceremonies or incantations, was so notorious, both in practice and effect throughout England, France, Spain, Italy, and the eastern countries, that laws were enacted by the Legislature in each of those kingdoms expressly to prohibit the performance of it, on pain of death. The form and manner of it is in part mentioned in the statutes, though by no means fit to be openly described here. The art of *Transplantation* is also reckoned amongst charms and sygils; and indeed one part of it, viz. the transferring of diseases, is really magical, and was much in practice amongst witches and wizzards; and I am confidently informed is now frequently done in the more remote and unpolished parts of this island. The method is, by giving certain baits or preparations to any domestic animal, they remove fevers, agues, coughs, consumptions, asthmas, &c. from any person, applying to them for that purpose; or they can transplant or remove them from one person to another, by burying certain images in their ground, or against their houses, with certain ominous inscriptions and Hebrew words; yet though these things are supposed to be done by magic, yet the effects are derived more from the sympathies and antipathies in nature, than from magical characters and conjurations; for many persons, without knowing any thing of the cause, how or why it is effected, more than the external form of words or touch, which is most simple, can remove diseases, take off warts and other excrescences, and perform many surprising cures at a distance from the patient, and even without seeing or knowing him; so by a similar property in the sympathy and antipathy of nature, certain leaves, roots, or juices, rubbed upon warts, or carnuous substances, or upon the hands, breast, legs, or other diseased part of the body, and buried under ground, remove or cure the same; which experiments take effect according to the *mediums*, and their consumption and putrefaction in the mother earth, of which the human source is principally compounded. Nor is it to be wondered that natural things, being fitted to the times and constellations, and compounded of correspondent or sympathetic ingredients, should produce such effects, without supernatural aid, or the agency of spirits. This is perfectly exemplified in that extraordinary preparation, called a *magical candle*, which being lighted, foretels the death of the party of whose blood it was prepared. It is compounded after the following manner:

manner: They take a good quantity of the venal blood luke-warm as it came out of the vein, which being chemically prepared with spirits of wine and other ingredients, is at last made up into a candle, which being once kindled, never goes out till the death of the party whose blood it is composed of; for when he is sick, or in danger, it burns dim and troubled; and when he is dead, it is quite extinguished; of which composition a learned philosopher hath wrote an entire tract, viz. *De Biolychnio*, or, *The Lamp of Life*.

In the simple operations of nature many wonderful things are wrought, which upon a superficial view appears impossible, or else to be the work of the devil. These certainly ought to be considered in a far different light from magical performances, and should be classed among the surprising phænomenæ of nature. Thus lamps or torches made of serpents' skins, and compounded of the fat and spirit of vipers, when lighted in a dark room, will bring the similitude of snakes or serpents writhing and twisting upon the walls. So oil compounded of grapes, being put into a lamp and lighted, will make the room appear to be full of grapes, though in reality it is nothing more than the idea or similitude.—The same thing is to be done with all the plants and flowers throughout the vegetable system, by means of a chemical analysis, whereby a simple spirit is produced, which will represent the herb or flower from which it is extracted, in full bloom. And as the process is easy, simple, pleasing, and curious, I will here state it in such a manner as might enable any person to put it in practice at pleasure.

Take any whole herb, or flower, with its root, make it very clean, and bruise it in a stone mortar quite small; then put it into a glass vessel hermetically sealed; but be sure the vessel be two parts in three empty. Then place it for putrefaction in a gentle heat in balneo, not more than blood warm, for six months, by which it will be all resolved into water. Take this water, and pour it into a glass retort, and place a receiver thereunto, the joints of which must be well closed; distil it in a sand heat until there comes forth a water and an oil; and in the upper part of the vessel will hang a volatile salt. Separate the oil from the water, and keep it by itself, but with the water purify the volatile salt by dissolving, filtering, and coagulating. When the salt is thus purified, imbibe with it the said oil, until it is well combined. Then digest them well together for a month in a vessel hermetically sealed; and by this means will be obtained a most subtil essence, which being held over a gentle heat of a candle, the spirit will fly up into the glass where it is confined, and represent the perfect idea or similitude of that vegetable whereof it
is



A LABORATORY.

*Showing how a Simple Spirit may be extracted, to represent
Flowers & Herbs, in Full Bloom.*

is the effence : and in this manner will that thin substance, which is like impalpable ashes or salt, send forth from the bottom of the glass the manifest form of whatever herb it is the *menstruum*, in perfect vegetation, growing by little and little, and putting on so fully the form of stalks, leaves, and flowers in full and perfect appearance, that any one would believe the same to be natural and corporeal ; though at the same time it is nothing more than the spiritual idea endued with a spiritual effence. This shadowed figure as soon as the vessel is taken from the heat or candle, returns to its *caput mortuum*, or ashes again, and vanishes away like an apparition, becoming a chaos or confused matter *.

To make a vegetable more quickly yield its spirit, take of what vegetable you please, whether it be the seed, flowers, roots, fruit, or leaves, cut or bruise them small, put them into warm water, put upon them yeast or barm, and cover them up warm; and let them work three days, in the same manner as beer, then distil them, and they will yield their spirit very easily. Or else take of what herbs, flowers, seeds, &c. you please, fill the head of a still therewith, then cover the mouth with coarse canvas, and set on the still, having first put into it a proportionable quantity of sack or low wine, then give it fire, and it will quickly yield its spirit ; but observe, that if the colour of the vegetable is wanted, you must take some of its dried flowers, and fill the nose of the still therewith, and you will have the exact colour of the herb.

To elucidate this process with better effect, I have subjoined a plate of the elaboratory, where a person is in the act of producing these flowery apparitions, in which fig. 1. represents a stone pestle and mortar, wherein the herbs, &c. are to be bruised before they are placed for putrefaction. Fig. 2, 2. are glass vessels hermetically sealed, containing the bruised herbs for putrefaction. Fig. 3. an empty glass retort. Fig. 4. a retort filled with the effence of an herb, and put into a sand heat for distillation. Fig. 5. a glass receiver joined to the retort, to receive the oil and spirit. Fig. 6. a stool on which rests the receiver. Fig. 7. the furnace made with different conveniences either for sand heat, or balnea. Fig. 8. the furnace holes wherein the fire is placed. Fig. 9. a table whereon are placed the glass vessels hermetically sealed. Fig. 10. a vessel containing the representation or similitude of a pink in full bloom.

* For more on the medicinal virtues of decoction of salt, or effence of herbs, flowers, roots, or seeds, see my new edition of Culpeper's Compleat Herbal, just published, with notes, additions, and illustrations, in quarto, with upwards of 400 elegant engravings of British herbs, plants, and flowers, coloured to nature.

Fig. 11. the representation of a sprig of rosemary. Fig. 12. the representation of a sprig of balm. Fig. 13. a candlestick with a candle lighted for the purpose of heating the spirit. Fig. 14. a chemist in the act of holding the glass vessel over the lighted candle, whereby, Fig. 15. represents the idea of a rose in full bloom.

Now this effect, though very surprising, will not appear so much a subject of our astonishment, if we do but consider the wonderful power of sympathy, which exists throughout the whole system of nature, where every thing is excited to beget or love its like, and is drawn after it, as the loadstone draws iron; the male after the female; the evil after the evil; the good after the good; which is also seen in wicked men and their pursuits, and in birds and beasts of prey; where the lamb delights not with the lion; nor the sheep in the society of the wolf; neither doth men, whose minds are totally depraved and estranged from God, care to adopt the opposite qualities, which are virtuous, innocent, and just. Without contemplating these principles, we should think it incredible that the grunting or wheeking of a little pig, or the sight of a simple sheep, should terrify a mighty elephant! and yet by that means the Romans put to flight *Pyrrhus* and all his host. One would hardly suppose that the crowing of a cock, or the sight of his comb, should abash a puissant lion; but experience has proved the truth of it to all the world. Who would imagine that a poisonous serpent could not live under the shade of an ash-tree; or that some men, neither deficient in courage, strength, or constitution, should not be able to endure the sight of a cat? and yet these things are seen and known to be so, by frequent observation and experience. The friendly intercourse betwixt a fox and a serpent, is almost incredible; and how fond and loving the lizzard is to man, we read in every treatise on natural history; which is not far, if any thing behind the fidelity of a spaniel, and many other species of dogs, whose sagacity and attention to their master is celebrated in an infinite variety of well-founded, though incredible stories. The amity betwixt a castrel and a pigeon, is remarked by many authors; particularly how furiously the castrel will defend a pigeon from the sparrow-hawk, and other inimical birds. In the vegetable system, the operation and virtue of herbs is at once a subject of admiration and gratitude, and which it were almost endless to repeat †. There is among them such natural accord and

† For the wonderful virtues and properties of herbs and plants, with their alimentary and medicinal qualities; and how to prevent or cure all diseases incident to the human body, at the *least* expence, and at the *greatest* certainty, see also my new edition of Culpeper's British Herbal, and Domestic Physician.

discord,

discord, that some will prosper more luxuriantly in another's company ; while some, again, will droop and die away, being planted near each other. The lilly and the rose rejoice by each other's side ; whilst the flag and the fern abhor one another, and will not live together. The cucumber loveth water, but hateth oil ; and fruits will neither ripen nor grow in aspects that are inimical to them. In stones likewise, in minerals, and in earth or mould, the same sympathies and antipathies are preserved. Animated nature, in every clime, in every corner of the globe, is also pregnant with similar qualities ; and that in a most wonderful and admirable degree. Thus we find that one particular bone taken out of a carp's head, will stop an hemorrhage of blood, when no other part or thing in the same creature hath any similar effect. The bone also in a hare's foot instantly mitigates the most excruciating tortures of the cramp ; yet no other bone nor part of that animal can do the like. I might also recite infinite properties with which it has pleased God to endue the form and body of man, which are no less worthy of admiration, and fit for this place, had we but limits to recount them. Indeed I don't know a much more remarkable thing, (were it as rare as it is now shamefully prevalent) or that would more puzzle our senses, than the effects of intoxication, by which wee see a man so totally overthrown, that not a single part or member of his body can perform its function or office, and his understanding, memory, and judgment so arrested or depraved, that in every thing, except the shape, he becomes a very beast ! But we find, from observation, that however important, however wonderful, how inexplicable or miraculous soever any thing may be ; yet if it is common, or familiar to our senses, the wonder ceases, and our enquiries end. And hence it is, that we look not with half the admiration upon the sun, moon, and stars, that we do upon the mechanism of a globe, which does but counterfeit their order, and is a mere bauble, the work of men's hands ! whence I might almost be justified in remarking, that if Christ himself had continued long in the habit of working miracles, and had left that power permanent and hereditary in the church, they would have long since grown into contempt, and not have been regarded as events worthy of our attention.

From what has been premised, we may readily conclude that there are two distinct species of magic ; one whereof being inherent in the occult properties of nature, is called *natural magic*, and the other being obnoxious and contrary to nature, is termed *infernal magic* ; because it is accomplished by infernal agency or compact with the devil. Each of these we will consider separately, with the good and evil consequences likely to result from them.

Under

Under the veil of natural magic, it hath pleased the Almighty to conceal many valuable and excellent gifts, which common people either think miraculous, or next to impossible. And yet in truth, natural magic is nothing more than the workmanship of nature, made manifest by art; for in tillage, as nature produceth corn and herbs; so art, being nature's handmaid, prepareth and helpeth it forward; in which times and seasons are materially to be considered; for *annus, non arvus producit aristas*. And though these things, while they lie hid in nature, do many of them seem impossible and miraculous, yet, when they are known, and their simplicity revealed, our difficulty of apprehension ceases, and the wonder is at an end; for that only is wonderful to the beholder, whereof he can conceive no cause nor reason, according to the saying of *Ephesius*, *miraculum solvitur unde videtur esse miraculum*; yet we often see persons take great pains, and put themselves to vast expence, to discover these impalpable tracks of nature, from whence pecuniary advantages seldom result; so that a man must not learn philosophy to grow rich; but must get riches to learn philosophy. There is unquestionably much praise due, and great industry required for obtaining a competent knowledge of natural magic; for to sluggards, niggards, and narrow-minded men, the secrets of nature are never opened, though the study of them is certainly conducive to the glory of God, and to the good of society, by more visibly manifesting the omnipotency of his works, and by skilfully applying them to man's use and benefit. Many philosophers of the first eminence, as *Plato, Pythagoras, Empedocles, Democritus*, &c. travelled through every region of the known world for the accomplishment of this kind of knowledge; and at their return, they publicly preached and taught it. But above all, we learn from sacred and profane history, that Solomon was the greatest proficient in this art of any either before or since his time; as he himself hath declared in *Ecclesiastes* and the book of *Wisdom*, where he saith, "God hath given me the true science of things, so as to know
 " how the world was made, and the power of the elements, the beginning and the end, and the midst of times, the change of seasons, the
 " courses of the year, and the situation of the stars, the nature of human
 " beings, and the quality of beasts, the power of winds, and the imaginations of the mind; the diversities of plants, the virtues of roots,
 " and all things whatsoever, whether secret or known, manifest or invisible." And hence it was that the Magi, or followers of natural magic, were accounted wise, and the study honourable; because it consists in nothing more than the most profound and perfect part of natural philosophy, which defines the nature, causes, and effects of things.

How

How far such inventions as are called charms, amulets, periapts, and the like, have any foundation in natural magic, may be worth our enquiry ; because if cures are to be effected through their medium, and that without any thing derogatory to the attributes of the Deity, or the principles of religion, I see no reason why they should be rejected with that inexorable contempt, which levels the works of God, with the folly and weakness of men. Not that I would encourage superstition, or become an advocate for a ferrago of absurdities ; but when the simplicity of natural things, and their effects, are rejected merely to encourage professional artifice and emolument, it is prudent for us to distinguish between the extremes of biggotted superstition, and total unbelief.

It was the opinion of many eminent physicians, of the first ability and learning, that such kind of charms or periapts as consisted of certain odoriferous herbs, balsamic roots, mineral concretions, and metallic substances, might have, and most probably possessed, by means of their strong medicinal properties, the virtue of curing or removing such complaints as external applications might effect, and which are often used with success, though without the least surprise or admiration ; because the one appears in a great measure to be the consequence of manual operation, which is *perceptible* and *visible* to the senses, whilst the other acts by an innate or occult power, which the eye cannot see, nor the mind so readily comprehend ; yet, in both cases, perhaps, the effect is produced by a similar cause ; and consequently all such remedies, let them be applied under what form or stile they may, are worthy of our regard, and ought to excite in us not only a veneration for the simple practice of the ancients in their medical experiments, but a due sense of gratitude to the wise author of our being, who enables us, by such easy means, to remove the infirmities incident to mankind. Many reputable authors, particularly *A. Ferrarius*, *Alexander Trallianus*, *Ætius*, *Octavianus*, *Marcellus*, *Philodotus*, *Archigines*, *Philostratus*, *Pliny*, and *Dioscorides*, contend that not only such physical alligations, appensions, periapts, amulets, charms, &c. which from their materials appear to imbibe and to diffuse the medical properties above described, ought in certain obstinate and equivocal disorders to be applied ; but those likewise, which from their external form and composition, have no such inherent virtues to recommend them ; for harm they can do none, and good they might do ; either by accident, or through the force of imagination. And it is asserted, with very great truth, that through the medium of hope and fear, sufficiently impressed upon the mind or imagination, whether by charms, or any other *Homeric* contrivance or device, the most wonderful and instantaneous cures are sometimes wrought. They are called

Homerical devices, or *Homerica medicatio*, because *Homer* was the first who discovered the blood to be suppressed, or its motion accelerated by the force of imagination ; and that diseases were to be removed or terminated thereby. Of the truth of this we have the strongest and most infallible evidence in the hiccough, which is instantaneously cured by any sudden effect of fear or surprise ; so likewise agues and many other maladies are removed, and to the same cause we might attribute the only *certain* cure known for the bite of a mad dog, which is the effect of fear and stagnation wrought upon the mass of blood by emerging the body in the sea. Nor are the instances few, where persons lying bedridden, and unable to move either hand or foot, have through the sudden fright of fire, or the house falling in upon them, forgot their infirmity, and ran away with as much activity, as though no such malady had existed. Seeing, therefore, that such virtues lie hid in the occult properties of nature, united with the sense or imagination of man, where one is the agent, and the other the patient ; where the one is active, and the other passive, without any compact with spirits, or dealings with the devil, we surely ought to receive them into our practice, and to adopt them as often as occasion seriously requires, although professional emolument, and pecuniary advantage, might in some instances be narrowed by it.

But though I might be an advocate for such charms or occult remedies as are in themselves perfectly innocent and simple, I by no means wish it to be understood, that I either approve, or recommend any thing bordering upon such inventions as are obviously founded in magical confederacy, and act by the medium of aerial or infernal spirits. To that mind, which has but slightly contemplated the works of nature, it must be abundantly evident, that the great and good God which sustains and governs the universe, hath in the works of creation mercifully afforded us a natural remedy for all our infirmities, and it is repugnant to common sense, and incompatible with religion and morality ; nay, it would imply a deficiency either in the goodness or power of the Deity, were we for a moment to admit the necessity of charms, amulets, or any other inventive cures or benefits to men, resulting from a compact with spirits, in which all the powers and performances of witchcraft had their beginning ; and therefore we may without the smallest hesitation conclude, that whatever hath its foundation in such confederacy, let the external object or pretence be what it may, it is not only contrary to nature, but highly offensive to the Deity, and nearly allied to the shocking sin of idolatry, by applying the works of God to the power of the devil. For this reason, it is impossible to be too cautious how the use of such description of charms or lamins are adopted, where,

where, instead of natural medicaments, magical characters, incantations, and nocturnal ceremonies, constitute the component parts. A very wise and learned author, who has written largely upon this subject, asserts, that in those very charms and signatures compacts themselves are virtually contained, which evil spirits at first subtilly devised or invented to blind mens eyes, that thereby they might lead them less scrupulously into the snares of the devil. And hence we have good ground to believe, that none are able absolutely, and bona fide, to call up any spirits, without some such compact first formed; and that whosoever has so far ventured in the art of magic or conjuration, hath, though to himself, perhaps, unknown, compacted with and worshipped the devil, under some such form of mystical words and characters, wherewith infernal charms and amulets are composed; neither is it to be thought a matter of surprise, that such a compact should unwittingly be made through the medium of those mystical characters, which, with the devil's aid, have in themselves a power to enchant, infect, allure, preserve, or destroy. And to shew, in striking colours, the danger of being drawn away by such allurements, I shall instance the extraordinary case of a very harmless and well-meaning young man, which was published to the world at the commencement of the present century, by the Bishop of Gloucester, in the following well authenticated letter to that prelate.

AUTHENTIC COPY of a LETTER sent to the Bishop of Gloucester, by the Reverend Mr. Arthur Bedford, Minister of Temple Church, in Bristol.

MY LORD,

Bristol, August 2d, 1703.

Being informed by Mr. Shute of your Lordship's desire that I should communicate to you what I had known concerning a certain person, who was acquainted with spirits to his own destruction, I have made bold to give you the trouble of this letter, hoping my desire to gratify your lordship in every particular may be an apology for the length thereof. I had formerly given an account to the late Bishop of Hereford, in which there are probably some things contained, which I do not now remember, which, if your Lordship could procure from his lady (who now lives near Gloucester) would be more authentic.

About thirteen years ago, whilst I was curate to Dr. Read, rector of St. Nicholas in this city, I began to be acquainted with one Thomas Perks, a man about twenty years of age, who lived with his father at Mongatsfield, a gunsmith; and contracted an intimacy with him, he being not only a very good natured man, but extremely skilled in mathematical studies which were his constant delight, viz. arithmetic, geometry,

metry, gauging, surveying, astronomy, and algebra ; he had a notion of the perpetual motion, much like that wheel in Archimedes's Mathematical Magic, in which he had made some improvements, and which he has held, was demonstrable from mathematical principles, though I could never believe it. I have seen an iron wheel, to which he intended to add several things of his own invention, in order to finish the same ; but, thinking it of no use, and being otherwise unfortunately engaged, it was never perfected. He gave himself so much to astronomy, that he could not only calculate the motions of the planets, but an eclipse also, and demonstrate any problem in spherical trigonometry from mathematical principles, in which he discovered a clear force of reason. When one Mr. Bayley, minister of St. James's in this city, endeavoured to set up a mathematical school, I advised him to this Thomas Perks, for an acquaintance, in whom, as he told me, he found a greater proficiency in those studies than he expected or could have imagined. After this he applied himself to astrology, and would sometimes calculate nativities and resolve horary questions. When by the providence of God, I was settled in Temple parish, and not having seen him for some time, he came to me, and we being in private, he asked my opinion very seriously concerning the lawfulness of conversing with spirits ; and after I had given my thoughts in the negative, and confirmed them with the best reason I could, he told me, he had considered all these arguments, and believed they only related to conjurations, but there was an innocent society with them which a man might use, if he made no compacts with them, did no harm by their means, and were not curious in prying into hidden things, and that he himself had discoursed with them, and heard them sing to his great satisfaction ; and gave an offer to me and Mr. Bayley at another time, that if we would go with him one night to King'swood, we should see them and hear them both talk and sing, and talk with them whenever we had a mind to, and we should return very safe ; but neither of us had the courage to venture. I told him the subtilty of the devil to delude mankind, and to transform himself into an angel of light, but he would not believe it was the devil. I had several conferences with him upon this subject, but could never convince him, in all which I could never observe the least disorder of mind, his discourse being very rational, and I proposed (to try him) a question in Astronomy relating to the projection of the spheres, which he projected and resolved, and did afterwards demonstrate from the mathematics, as to demonstrate at the same time, that his brain was free from the least tincture of madness and distraction.—Having this opportunity of asking him several particulars, concerning the methods he used, and the discourses he had with them, he told me he had a book whose directions he followed, and accordingly

cordingly in the dead time of the night, he went out to a cross way, with a lanthorn and candle consecrated for this purpose with several incantations. He had also consecrated chalk, consisting of several mixtures, with which he made a circle at what distance he thought fit, within which no spirit had power to enter. After this he invoked the spirit by several forms of words, (some of which he told me were taken out of the holy Scriptures, and therefore he thought them lawful, without considering how they might be wrested to his destruction) accordingly the spirits appeared to him which he called for, in the shape of little maidens, about a foot and a half high, and played about a circle. At first he was somewhat affrighted, but after some small acquaintance, this antipathy in nature wore off, and he became pleased with their company. He told me they spoke with a very shrill voice, like an ancient woman; he asked them if there was a heaven or hell, they said there was. He asked them what place heaven was, which they described as a place of great glory and happiness, and he asked them what hell was, and they bade him ask no questions of that nature, for it was a dreadful thing to relate it, and the devils believe and tremble. He farther asked them what method or order they had among themselves; they told him they were divided into three orders, that they had a chief whose residence was in the air; that he had several counsellors which were placed by him in form of a globe, and he in the centre, which was the chiefest order; another order was employed in going to and from thence to the earth, to carry intelligence from those lower spirits; and their own order was on the earth, according to the directions they should receive from those in the air.

This description was very surprising, but being contrary to the account we have in scripture of the hierarchy of the blessed angels, made me conclude they were devils, but I could not convince him of it. He told me he had bade them sing, and they went to some distance behind a bush, from whence he could hear a perfect concert of such exquisite music as he never before heard; and in the upper part he heard something very harsh and shrill like a reed, but as it was managed, did give a particular grace to the rest.

About a quarter of a year after he came again to me, and wished he had taken my advice, for he thought he had done that which would cost him his life, and which he did heartily repent of; and indeed his eyes and countenance shewed a great alteration. I asked him what he had done: He told me that being bewitched to his acquaintance, he resolved to proceed farther in this art, and to have some familiar spirit at his command, according to the directions of his book, which were as follows:—

No. 60.

13 A.

He

He was to have a book made of virgin parchment consecrated with several incantations, likewise a particular inkhorn, ink, &c. for his purpose; with these he was to go out as usual to a cross way, and call up a spirit, and ask him his name, which he was to put in the first page of his book, and this was to be his familiar. Thus he was to do by as many as he pleased, writing their names in distinct pages, only one in a leaf, and then whenever he took the book and opened it, the spirit whose name appeared, should appear also; and putting this in practice, the familiar he had was called Malchi, (be my king) a word in Hebrew of an unknown signification. After this they appeared faster than he desired, and in most dismal shapes, like serpents, lions, bears, &c. hissing at him, and attempting to throw spears and balls of fire, which did very much affright him, and the more when he found it not in his power to stay them, insomuch that his hair (as he told me) stood upright, and he expected every moment to be torn in pieces; this happened in December about midnight, when he continued there in a sweat till break of day, and then they left him, and from that time he was never well as long as he lived. In his sickness he came frequently to Bristol, to consult with Mr. Jacob, an apothecary in Broad-street, concerning a cure, but I know not whether he told him the origin of his sickness or not; he also came to me at the same time, and owned every matter of fact, until the last, and insisted that when he did any thing of this nature, he was deluded in his conscience to think it lawful, but he was since convinced to the contrary. He declared he made no compacts with any of those spirits, and never did any harm by their means, nor ever pryed into the future fortune of himself or others, and expressed an hearty repentance and detestation of his sins; so that though those methods cost him his life in this world, yet I have great reason to believe him happy in the other. I am not certain that he gave this account to any other person but myself, though he communicated something of it to Mr. Bayley, minister of St. James's in this city; perhaps your Lordship may be further informed by his relations and neighbours of Mangotsfield, which lies in Gloucestershire, not above a mile out of the road to Bath.

I have frequently told this story, but never mentioned his name before, and therefore if your Lordship hath any design of printing such accounts as these, I desire it may be with such tenderness to his memory as he deserved, and so as may not be the least prejudice to his relations, who have the deserved character of honest and sober people. I am,

Your Lordship's dutiful

son and servant,

ARTHUR BEDFORD.

This

This poor deluded young man, it is very apparent, had no evil design, but entered into this infernal association for no other motive, than to gratify an idle curiosity; the consequence of which was, that he underwent the most undeliberate terror and fright, which at first deprived him of his health, and eventually of his life. I have no doubt but the circumstance of disbelieving the existence of spirits, (which I apprehend is more or less the case with most people), was the first, if not the only inducement that urged him to make the experiment. There are many instances of a similar kind, equally well founded, and as fatal in their consequences, which might be here adduced, to shew the dreadful effects of being led away by a presumptuous or hardened mind, to disbelieve the word of God revealed in a thousand passages of scripture, where this infernal intercourse is seriously forbidden; but I sincerely hope, and have reason to believe, that this example will operate as a sufficient bar against all similar enquiries, where it is once read, and the melancholy consequences duly considered. Wherefore let me entreat all my readers to stifle every inordinate desire, which might unguardedly prompt them to solicit an intercourse with such dangerous company; nor to attempt the conjuration of spirits of any description or order; no, not even out of joke or bravado, or for fun, or frolic; for the devils are continually going about “*seeking whom they may devour*,” they are ever on the watch, and ready at hand to catch at every thought that might be turned to their purpose; and when they have once so far succeeded as to occupy the smallest place in the mind, I fear it will prove no easy task to dispossess them.

Let it ever be remembered, that the first assaults of wicked spirits, are usually made upon our sensual desires, whereby they insinuate themselves into our very appetites, enticing our inclinations, and depraving the moral faculties of the mind; until they become, as it were, incorporated with our nature, leading us insensibly from folly to vice, until a depravity of heart, and an obstinate will, betrays us into a corporal as well as spiritual compact with the devil. These considerations, seconded by an anxious wish to rescue the astral science from the imputation of magical and diabolical connexion, and which, I trust, I have fully and effectually accomplished, were the grand inducements that led me to explore the spiritual and infernal kingdoms, and to expose the iniquity, as well as to explain the theory, of familiarity or compact with them. And in doing this, I have scrupulously avoided giving the essential forms and particular consecrations adapted to mystical performances, lest the unwary speculator might carry his experiments too far, and, as in the example before us, unwittingly seek his own destruction. Yet I have, as far
as

as *safety* or conveniency would permit, explained the *speculative* part; reserving only those especial *forms* and *incantations*, which being not only very facil, but of wonderful occult power, would be dangerous to disclose; and at best could only serve to strengthen the hands of the malicious and evil minded, or to extend more widely the infernal empire; against which we ought to put on “*the whole armour of God; for we wrestle not*” “*against flesh and blood, but against principalities and powers; for which*” “*cause we should resolutely withstand the assaults of the devil, our loins being*” “*girt about with verity, and having on the breast plate of righteousness.*” Nor let us vainly seek to know the mysteries of the other world, farther than it hath pleased God to reveal them to us by his divine word; for *infiniti ad finitum nulla est proportio, neque loci potest circumscribi*,—of that which is finite, to that which is infinite, there is no proportion; neither can that which is immeasurable be contained within the limits of space, or be defined by human comprehension.

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F I N I S.

A) Revolutionary Table								A Table Collecting all the Days of the Year Successively													
Deg	Days	H	Min	Min	D	H	M	Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
1	4	4	56		1	0	1	41	1	1	32	60	91	121	152	182	213	244	274	305	335
2	8	9	52		2	0	3	22	2	2	33	61	92	122	153	183	214	245	275	306	336
3	12	14	48		4	0	6	44	3	3	34	62	93	123	154	184	215	246	276	307	337
4	16	19	44		6	0	10	6	4	4	35	63	94	124	155	185	216	247	277	308	338
5	21	0	40		8	0	13	28	5	5	36	64	95	125	156	186	217	248	278	309	339
6	25	5	36		10	0	16	50	6	6	37	65	96	126	157	187	218	249	279	310	340
7	29	10	32		12	0	20	12	7	7	38	66	97	127	158	188	219	250	280	311	341
8	33	15	28		14	0	23	33	8	8	39	67	98	128	159	189	220	251	281	312	342
9	37	21	24		16	1	2	55	9	9	40	68	99	129	160	190	221	252	282	313	343
0	42	2	20		18	1	6	17	10	0	41	69	100	130	161	191	222	253	283	314	344
11	46	7	16		20	1	9	39	11	11	42	70	101	131	162	192	223	254	284	315	345
12	50	12	12		22	1	13	1	12	12	43	71	102	132	163	193	224	255	285	316	346
13	54	17	8		24	1	16	23	13	13	44	72	103	133	164	194	225	256	286	317	347
14	58	22	4		26	1	19	45	14	14	45	73	104	134	165	195	226	257	287	318	348
15	63	3	0		28	1	23	7	15	15	46	74	105	135	166	196	227	258	288	319	349
16	67	7	56		30	2	2	28	16	16	47	75	106	136	167	197	228	259	289	320	350
17	71	12	52		32	2	5	40	17	17	48	76	107	137	168	198	229	260	290	321	351
18	75	17	48		34	2	9	2	18	18	49	77	108	138	169	199	230	261	291	322	352
19	79	22	44		36	2	12	24	19	19	50	78	109	139	170	200	231	262	292	323	353
20	84	3	40		38	2	15	46	20	20	51	79	110	140	171	201	232	263	293	324	354
22	92	13	32		40	2	19	8	21	21	52	80	111	141	172	202	233	264	294	325	355
24	100	23	24		42	2	22	30	22	22	53	81	112	142	173	203	234	265	295	326	356
26	109	9	16		44	3	1	52	23	23	54	82	113	143	174	204	235	266	296	327	357
28	117	19	8		46	3	5	14	24	24	55	83	114	144	175	205	236	267	297	328	358
30	126	5	0		48	3	8	36	25	25	56	84	115	145	176	206	237	268	298	329	359
40	168	7	20		50	3	11	58	26	26	57	85	116	146	177	207	238	269	299	330	360
50	210	9	40		52	3	15	20	27	27	58	86	117	147	178	208	239	270	300	331	361
60	252	12	0		54	3	18	42	28	28	59	87	118	148	179	209	240	271	301	332	362
70	294	14	20		56	3	22	4	29	29		88	119	149	180	210	241	72	302	333	363
80	336	16	40		58	4	1	26	30	30		89	120	150	181	211	242	273	303	334	364
87	365	5	12		60	4	4	56	31	31		90		151		212	243		304		365